

## Appendix A



USFWS

*The tundra swan winters within Back Bay NWR impoundments and shallow bay*

## Findings of Appropriateness and Compatibility Determinations

## **COMPATIBILITY DETERMINATIONS FOR PRIORITY PUBLIC USES**

- ☒ Wildlife Observation, Photography, Environmental Education, and Interpretation
- ☒ White tailed Deer and Feral Hog Hunting
- ☒ Waterfowl Hunting
- ☒ Fresh and Saltwater Fishing and Crabbing

## **COMPATIBILITY DETERMINATION**

**USE:** Wildlife Observation, Photography, Environmental Education, and Interpretation

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

National Wildlife Refuge System Administration Act of 1996, as amended by the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 6688dd, et seq.)

### **REFUGE PURPOSES**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is this use? Is it a priority public use?**

The uses are wildlife-oriented recreational activities: wildlife observation, photography, environmental education and interpretation, including special self-instructed groups participating in these activities. These are priority public uses of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997.

#### **(b) Where would the use be conducted?**

Refuge Barrier Spit (Northern/Public Use Zone) (Map A-1): This developed area comprises approximately 280 acres, and serves more than 110,000 visitors annually. This area includes a Visitor Contact Station (VCS), interior and exterior interpretive displays, mounted wildlife

viewing scopes, outdoor environmental education classroom and activity pier, pedestrian trail system, two boardwalks providing access to four miles of beach, canoe/kayak launch, wildlife viewing facility with interpretive displays, viewing scopes and adjacent restroom, and an entrance station with approximately one mile of entrance road that exists at the northern portion of the Refuge's barrier spit property. We will expand this zone for public use in order to access the newly constructed wildlife viewing facility (mentioned above), located at the northern edge of the "C" Pool impoundment (see next paragraph).

Refuge Barrier Spit (Southern/Impoundment Zone) (Map A-1): Comprising more than 900 acres of restored wetlands, this section of the Refuge currently provides two dike roads that serve as trails through the Refuge, and provides wildlife viewing and photography opportunity. Visitors must pass through the Refuge Barrier Spit, Northern Zone in order to access this area. No public vehicle traffic or parking is permitted in this area. This area serves more than 20,000 visitors annually. The only change to wildlife-oriented activities planned in this area is to expand public access to the wildlife viewing facility at the northern edge of "C" Pool.

Refuge West Side (Map A-2): The Asheville Bridge Creek Environmental Education Center (ABCEEC) is a 1,800 square foot converted home on a 17-acre parcel. It provides environmental education, interpretation, and wildlife observation and photography via a short self-guided interpretive trail, outdoor classroom, and a wildlife viewing/activity pier. The Horn Point Canoe/Kayak Launch Facility provides wildlife observation and photography opportunities. There is also a wildlife viewing platform at the Frank Carter Impoundment on Colchester Road.

We have future plans to construct a new Refuge Headquarters and Visitor Contact Station on Tract #244 at the corner of Sandbridge Road and New Bridge Road, which will provide these uses. Located here will be a multi-purpose trail system that will allow for wildlife observation, photography, and self-guided and personal service interpretation via interpretive displays. This proposed public use area comprises approximately 61.5 acres, and is expected to serve more than 150,000 visitors annually. Once the new facility is constructed, we also propose to convert a Refuge house (Tract #135) into an environmental education center.

Three additional canoe/kayak launch sites are planned to be constructed, which will facilitate wildlife observation and photography. These new sites are discussed in detail in a separate Compatibility Determination (see Boat Launching).

**(c) When would the use be conducted?**

Refuge Barrier Spit (Northern/Public Use Zone): Year-round, one-half hour before sunrise to one-half hour after sunset. A temporary closure to these activities would be implemented during any scheduled Refuge hunt dates.

Refuge Barrier Spit (Southern/Impoundment Zone): From April 1 through October 31, from one-half hour before sunrise to a one-half hour after sunset. Public vehicle access/parking is prohibited year-round. The Southern Zone oceanfront beach remains open to these activities year-round, except on scheduled public hunt dates.



The impoundments provide undisturbed resting and feeding for migratory waterfowl during the winter months; therefore, this area is closed to all public access from November 1 through March 31, with the exception of several monthly wildlife viewing tram trips, provided by Refuge staff. The only change to wildlife-oriented activities planned in this area is the expansion of public access to the wildlife viewing facility.

Refuge West Side: Year-round from one-half hour before sunrise to one-half hour after sunset, at all locations, with the exception of Horn Point Canoe/Kayak Launch Site, which is open from April 1 through October 31 annually. The ABCEEC site is for educational and other organized group visits, by reservation only, for the purpose of environmental education.

**(d) How would the use be conducted?**

We will conduct these four priority uses much as we conduct them presently. Such activities are allowed on established roads, trails, and in buildings that have been designed to accommodate such uses, in areas that are the least sensitive to human intrusion. These uses are conducted for the general public, as well as for organized groups, including schools and scout groups. Groups of 10 or more are required to have permission to visit the Refuge for these activities, and a seasonal entrance fee from April 1 through October 31 will be charged to all, with the exception of school groups, scouts on merit badge projects assignments, or children under 16 years of age. There is a mix of personal and non- personal program delivery, including interpretive signing, audio-visual presentations, brochures, special events, guided walks and talks, exhibits, web site information, and informal visitor information contacts.

Self-guided groups are those who wish to host their own wildlife dependent activities. As stated above, groups of 10 or more are required to have permission for these activities. Each request must be presented in writing with details of who, what, where, when, why, and how the activity will be conducted. Each request has different logistics, and therefore, would be evaluated for impacts on Refuge purposes. Using professional judgment, as long as there is no significant negative impact to natural resources or visitor services, or violation of Refuge regulations, a Special Use Permit will be issued outlining the framework in which this use can be conducted. Refuge staff will ensure compliance with the Permit.

**(e) Why is the use being proposed?**

Wildlife observation and photography, and environmental education and interpretation are four of the six priority public uses of the National Wildlife Refuge System. If compatible, they are to receive enhanced consideration over other secondary public uses.

**AVAILABILITY OF RESOURCES:**

The resources necessary to provide and administer these uses, at current use levels, is available within current and anticipated Refuge budgets. Staff time associated with administering this use is related to assessing and conducting maintenance, including kiosks, gates and signs, monitoring potential impacts of the use on Refuge resources and visitors, and providing information to the public about the use.

The Visitor Services Manager is available for public outreach. A Park Ranger monitors visitor use and user interactions. The Park Ranger conducts law enforcement activities to provide for visitor safety and resource protection. Maintenance staff performs the regular maintenance and repairs.

Permitting self-guided groups is also within the resources available to administer our Visitor Services Program. Additional staff costs are incurred to review each request, coordinate with the outside entity and process a Special Use Permit, if necessary. Compliance with the terms of the Permit is within the regular duties of the Station Law Enforcement Officer.

## **ANTICIPATED IMPACTS OF THE USE:**

Wildlife observation, photography, environmental education, and interpretation can affect the wildlife resource positively or negatively. A positive effect of public involvement in these priority public uses will be a better appreciation and more complete understanding of Refuge wildlife and habitats. That can translate into more widespread, stronger support for the Refuge, the Refuge System, and the Service.

Wildlife observation and photography have the potential of impacting shorebird, waterfowl, marshbirds and other migratory bird populations feeding and resting near the trails and on beaches during certain times of the year. Use of upland trails is more likely to impact songbirds than other migratory birds. Human disturbance to migratory birds has been documented in many studies in different locations.

### *Direct Impacts*

Direct impacts have an immediate affect on wildlife. We expect those impacts to include the presence of humans disturbing wildlife, which typically results in a temporary displacement without long-term effects on wildlife individuals or populations. Some species will avoid the areas people frequent, such as the developed trails and the buildings, while others seem unaffected by or even drawn to the presence of humans. Overall, those effects should not be significant, because most of the Refuge will experience minimal public use.

Conflicts arise when migratory birds and humans are present in the same areas (Boyle and Samson 1985). Response of wildlife to human activities includes: departure from site (Owen 1973, Burger 1981, Korschgen et al 1985, Henson and Grant 1991, Kahl 1991, Klein 1993), use of suboptimal habitat (Erwin 1980, Williams and Forbes 1980), altered behavior (Burger 1981, Korschgen et al. 1985, Morton et al. 1989, Ward and Stehn 1989, Havera et al. 1992, Klein 1993), and increase in energy expenditure (Morton et al. 1989, Belanger and Bedard 1990). McNeil et al. (1992) found that many waterfowl species avoid disturbance by feeding at night instead of during the day. The location of recreational activities impacts species in different ways. Miller et al. (1998) found that nesting success was lower near recreational trails, where human activity was common, than at greater distances from the trails. A number of species have shown greater reactions when pedestrian use occurred off trail (Miller, 1998). In addition, Burger (1981) found that wading birds were extremely sensitive to disturbance in the northeastern U.S. In regard to waterfowl, Klein (1989) found migratory dabbling ducks to be the most sensitive to disturbance and migrant ducks to be more sensitive when they first arrived, in the late fall, than later in winter. She also found

gulls and sandpipers to be apparently insensitive to human disturbance, with Burger (1981) finding the same to be true for various gull species.

For songbirds, Gutzwiller et al. (1997) found that singing behavior of some species was altered by low levels of human intrusion. Pedestrian travel can impact normal behavioral activities, including feeding, reproductive, and social behavior. Studies have shown that ducks and shorebirds are sensitive to pedestrian activity (Burger 1981, 1986). Resident waterbirds tend to be less sensitive to human disturbance than migrants, and migrant ducks are particularly sensitive when they first arrive (Klein 1993). In areas where human activity is common, birds tolerated closer approaches than in areas receiving less activity.

#### *Indirect Impacts*

Laskowski et al. (1993), studied behavior of snowy egrets, female mallards, and greater yellowlegs on Back Bay NWR within 91.4 meters of impoundment dikes used by the general public. Behavior of snowy egrets was recorded during August and September 1992 to represent post-breeding marsh and wading birds. Mallards were monitored during migration (November 1992) and during the winter January (1993). Greater yellowlegs' behavior was observed during the northward shorebird migration (May 1993). Behavior was monitored during the typical public activities of walking, bicycling, and driving a vehicle past the sample sites.

The study found that snowy egret resting behavior decreased and alert behavior increased in the presence of humans. Preening decreased when humans were present, but this change was not significant. Feeding, walk/swim, and flight behaviors were not related to human presence. Female mallards in November increased feeding, preening and alert behaviors in the presence of humans. Resting, walk/swim, and flight behavior were not influenced by human presence. In January, female mallard resting and preening behavior were not influenced by the presence of humans. However, feeding, alert, walk/swim, and flight behaviors were related to human presence. Greater yellowlegs increased alert behavior in the presence of humans. No other behaviors were affected. Maintenance behavior (combined feeding, resting, and preening) decreased when humans were present for all study species. In addition, this decrease was accompanied by an increase in escape behavior by each species. Maintenance behavior of mallards in January decreased in the presence of vehicles and combined disturbance. Escape behavior increased when vehicles were present. Maintenance behavior of greater yellowlegs declined when bicycles and vehicles were present but was not influenced by pedestrian presence.

The presence of bicycles and vehicles increased escape behavior. Snowy egrets and female mallards increased movement between subplots and to areas within the study area but further from the disturbance.

During a five year study which involved nine different species of birds, researchers found only minimal evidence that intrusion affected bird distributions (Gutzwiller and Anderson 1999). This study also found that the species affected by intrusion were not consistent from year to year or within study areas and could be due to habituation of intrusion (Gutzwiller and Anderson 1999).

People can be vectors for invasive plants by moving seeds or other propagules from one area to another. Once established, invasive plants can out-compete native plants, thereby altering habitats

and indirectly impacting wildlife. The threat of invasive plant establishment will always be an issue requiring annual monitoring and treatment when necessary. Our staff will work at eradicating invasive plants and educating the visiting public. Also, opening Refuge lands to public use can often result in littering, vandalism, or other illegal activities on the Refuge.

#### *Cumulative Impacts*

Impacts may be minor when we consider them alone, but may become important when we consider them collectively. Our principal concern is repeated disruptions of nesting, resting, or foraging birds. Our knowledge and observations of the affected areas show no evidence that these four, priority, wildlife-dependent uses cumulatively will adversely affect the wildlife resource. Although we do not expect substantial cumulative impact from these four priority uses in the near term, it will be important for Refuge staff to monitor those uses and, if necessary, respond to conserve high-quality wildlife resources.

Refuge staff, in collaboration with volunteers, monitor and evaluate the effects of these priority public uses to discern and respond to any unacceptable impacts on wildlife or habitats. To mitigate those impacts, the Refuge will continue to close areas to the public to protect wildlife during critical life periods.

#### **PUBLIC REVIEW AND COMMENT:**

As part of the CCP process for Back Bay NWR this compatibility determination was made available for a 30-day public review and comment period with the release of the Draft CCP/EA.

#### **DETERMINATION (CHECK ONE BELOW):**

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

#### **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

No off-road or off-trail access will be permitted, except for emergency or administrative purposes, for the current motor vehicle access permit program for North Carolina residents, and for hunters.

For self-guided groups, each request must be presented in writing with details of who, what, where, when, why, and how the group activity will be conducted. Each request will then be evaluated for impacts to the Refuge. Using professional judgment, as long as there is no significant negative impact to natural resources or visitor services, or violation of Refuge regulations, a Special Use Permit will be issued outlining the framework in which this use can be conducted.



## **JUSTIFICATION:**

These four priority public uses provide compatible educational and recreational opportunities for visitors to enjoy Refuge resources, and improve their understanding and appreciation of fish and wildlife, ecology, refuge management practices, and the relationship of plant and animal populations in the ecosystem. Refuge visitors will better understand the Service role in conservation, and opportunities, issues, and concerns faced in management of our natural resources. Further, they will understand the impact that human presence, disturbance, and/or consumption can cause to these resources. Likewise, these four priority uses provide opportunities for visitors to observe wildlife habitats firsthand, and learn about wildlife and wild lands at their own pace in an unstructured environment. Authorization of these uses will result in a greater constituency for achieving Refuge goals, and, ultimately, the Service mission. These activities do not materially interfere with or detract from the mission of the NWRS or purposes for which Back Bay NWR was established.

Signature: Refuge Manager  9/16/2010  
(Signature and Date)

Concurrence: Regional Chief  09/16/2010  
(Signature and Date)

Mandatory 15-year re-evaluation date: 09/16/2025  
(Date)

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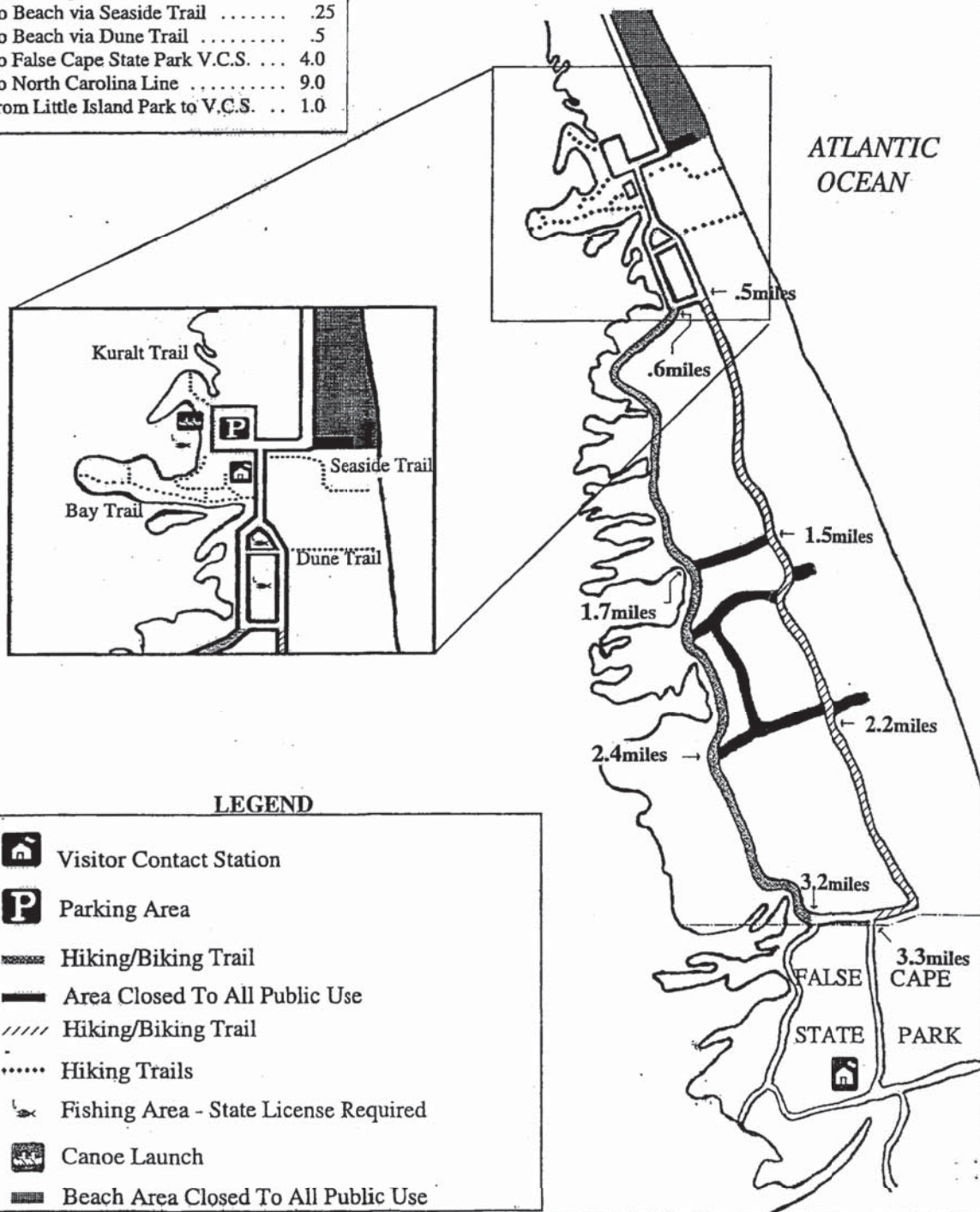
## Appendix A: Findings of Appropriateness and Compatibility Determinations

Map A-1

## Back Bay National Wildlife Refuge

## One-way Mileage from V.C.S.

End of Bay Trail .....	.4
To Beach via Seaside Trail .....	.25
To Beach via Dune Trail .....	.5
To False Cape State Park V.C.S. ...	4.0
To North Carolina Line .....	9.0
From Little Island Park to V.C.S. ...	1.0



Back Bay National Wildlife Refuge

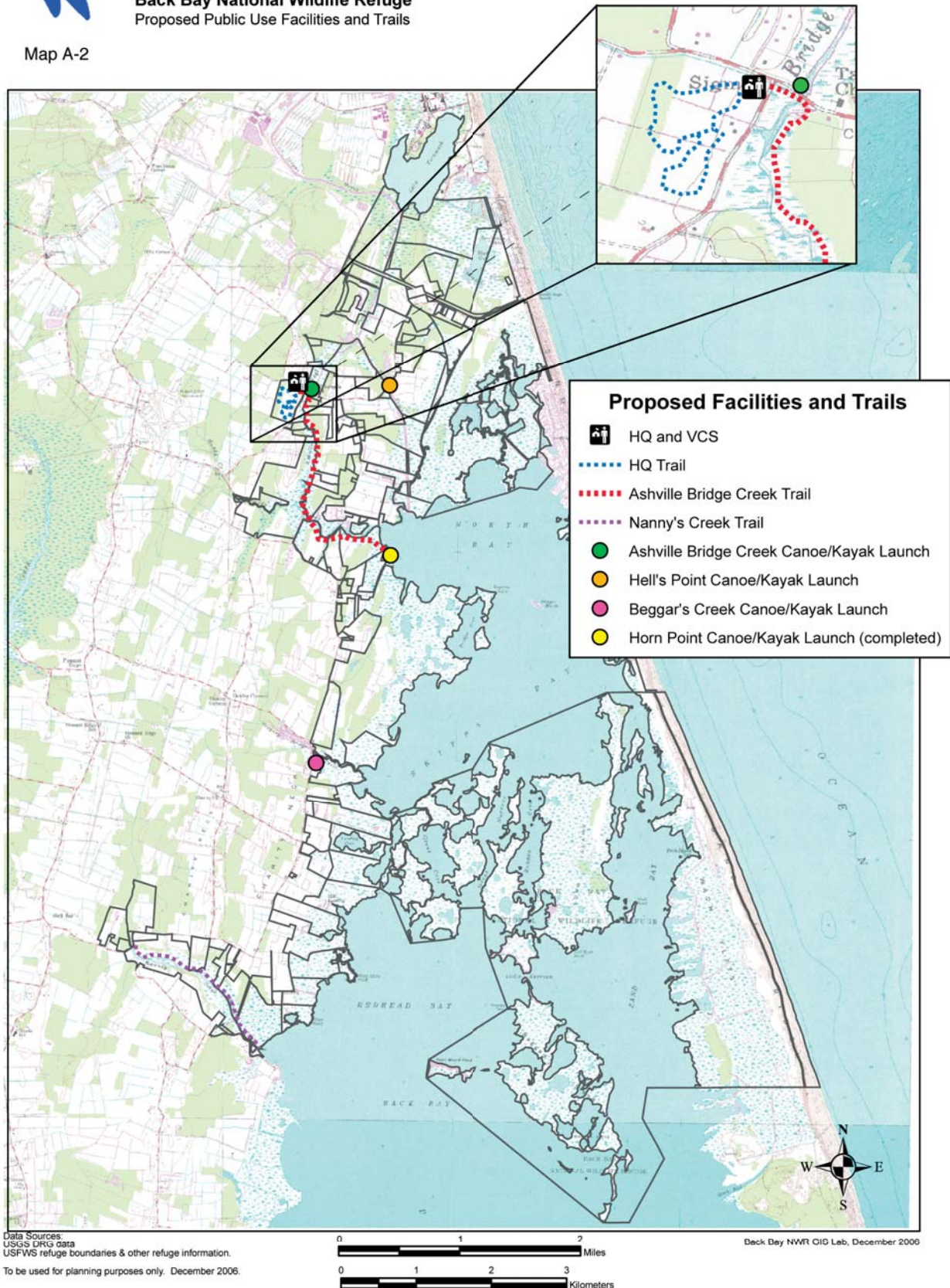
Appendix A: Findings of Appropriateness and Compatibility Determinations



**Back Bay National Wildlife Refuge**  
Proposed Public Use Facilities and Trails

*Draft Comprehensive Conservation Plan*

Map A-2





## **COMPATIBILITY DETERMINATION**

**USE:** White-tail Deer and Feral Hog Hunting

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

National Wildlife Refuge System Administration Act of 1996, as amended by the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 6688dd, et seq.)

### **REFUGE PURPOSES**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
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### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is the use? Is the use a priority public use?**

The use is white-tail deer and feral hog hunting. Hunting is a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57).

#### **(b) Where would the use be conducted?**

Eight hunting zones (Map A-3) totaling 2,094 acres are open for public hunting. Seven of the zones are adjacent to the oceanfront; six of these are south of the maintenance compound and one north of the office/Visitor Contact Station. The first zone is on Long Island in Back Bay. Habitats of hunted areas include 1,037 acres of open marsh, 284 acres of forested habitat, and 686 acres of Long Island fields, forest, and open marshes.

We will expand deer hunting opportunities on the North and West sides of the Refuge on 1,394 acres. Deer and hog hunting opportunities will be provided at the following locations (Map A-4):

- ☒ Sandbridge Beach area, north and south of Sandbridge Road on Tracts 101d, 102, 103, 104, 104a, 104b, 106, 108b, and 110. Parking would be provided at the old tower pad on Tract 107, on Tract 106b, and we would coordinate with the City of Virginia Beach for possible parking at the Sandbridge Fire Station and along the utility right-of-way adjacent to Tract 106b;
- ☒ Sandbridge Road at the “old hunt club” on Tract 104b. This portion of Tract 104b has an existing road and parking area on site.
- ☒ Sandbridge Road at the “reforestation site” on Tract 125a. This area has an existing road and parking area on site.
- ☒ Colchester Road on Tract 150. This area has an existing road and parking area on site.
- ☒ At the end of Banks Lane on Tract 127a (bow only). Parking would be provided on federal property at the end of Banks Lane;
- ☒ Muddy Creek Road on Tracts 163, 166, and 169 (bow only). Parking would be provided on federal property on Tracts 163a and 166;
- ☒ Muddy Creek Road at Pleasant Ridge Road on Tract 194, with parking on site.

**(c) When would the use be conducted?**

The State determines hunting seasons annually, usually beginning October 1 and ending in early January. The deer and hog hunt on the barrier spit of the Refuge is usually conducted for up to 7 days in October; currently split between four days the first week, with the three remaining days occurring two weeks later. The Refuge evaluates the hunt on an annual basis, and may slightly reduce or increase the hunt to consider factors such as species and hunter numbers, as well as habitat impacts.

New hunting zones proposed in the CCP will be established in two phases in order to accomplish existing habitat management objectives. Once established upon completion of the CCP, each new zone will be open approximately 3-5 consecutive days in each of October, November, and December, in accordance with VDGIF season dates, unless safety or overriding resource concerns would make hunting incompatible. The Refuge will annually evaluate the hunt to consider resource conditions related to hunting.

Within 3 years of CCP completion the following zones are planned to be open:

- ☒ Sandbridge area, north and south of Sandbridge Road on Tracts 101d, 102, 103, 104, 104a, 104b, 106, 108b, and 110.
- ☒ Banks Lane on Tract 127a (bow only).
- ☒ Muddy Creek Road on Tracts 163, 166, and 169 (bow only).
- ☒ Muddy Creek Road at Pleasant Ridge Road on Tract 194.

10 years after CCP completion the following zones are planned to be open:

- ☒ Sandbridge Road at the “old hunt club” on Tract 104b.

- ☒ Sandbridge Road at the “reforestation site” on Tract 125a.
- ☒ Colchester Road on Tract 150.

**(d) How would the use be conducted?**

The Refuge permits hunting within state guidelines in compliance with a hunt program that we adjust each year to ensure safety and good wildlife management. Hunt season dates, limits and/or number of hunters per day are adjusted as needed to achieve balanced wildlife population levels within carrying capacities. (There are no limits or quotas on feral hogs, as these are considered a nuisance species). Back Bay National Wildlife Refuge has held an annual deer hunt since 1986. The deer and feral hog hunt program is a cooperative effort with the State of Virginia Department of Game and Inland Fisheries (VDGIF), the State Department of Conservation and Recreation, False Cape State Park (FCSP), and a contractor who administers the lottery system to which hunters apply.

Through the lottery process it allows the hunters to select the day and zone of their choice. If they do not get selected for this specified day and zone, the option of “any day or zone” can be selected as an alternative. Rules and regulations are posted on the Cyberdata website along with maps. This site also allows the hunter to purchase the required state hunting license. Hunter’s can access Cyberdata through VDGIF and Back Bay NWR websites. Paper applications provided by VDGIF are also available at sporting goods stores as well as a local vendors. Upon applying by website or pamphlet, the newly adapted “Buddy System” allows a hunter to bring someone with them to hunt. On each hunt day, a maximum of 62 hunters are allowed to hunt within the eight identified hunt zones (2,094 acres). If these slots are not filled, the stand-by hunter (hunters that did not get selected through the lottery system) along with a “Buddy” are then selected through a lottery system conducted on the Refuge. Stand-by hunters can then choose the remaining slots available.

This existing hunt is highly managed by Refuge and FCSP staff, and volunteers. On each day of the hunt, upon registration, a signed rules and regulations confirmation sheet is turned in and a permit is issued to each hunter. A hunter safety orientation is provided and then the hunters are shuttled to their designated zones. In cooperation with False Cape State Park, hunters are picked up every hour and return to the registration station for data collection on harvested game and check out.

Expansion of the deer hunt will also be administered as a lottery hunt, in cooperation with VDGIF and the existing contract with Cyberdata to which hunters will apply (see above). However, the hunt will not be highly managed daily by staff, like the existing hunt. Forty-four hunters will be allowed to hunt the new zones, which is approximately two hunters per 50 acres (including the “Buddy”). Hunters applying to hunt the new zones can select a preferred zone and month to hunt. Selected hunters will be permitted to hunt all allowable days (3-5 to be determined at a later date) within their selected month. There will be no stand-by hunters permitted. In the selection notice, the hunters will receive their permit, which shall be carried at all times, parking pass, regulations, and harvest data card. Hunters will park in the area assigned to their selected zone, with their parking pass placed on the vehicle dashboard. Hunters will be required to return the signed regulations and harvest data card to a designated drop box in order for the Refuge to collect hunter effort and harvest data. If selected hunters do not return the required information, those individual will be ineligible for the lottery the following year.

Signage will be posted along all hunt zone boundaries. Refuge law enforcement as well as state law enforcement would ensure that all hunters follow State and Refuge regulations. No “drive-hunting” will be allowed – only still-hunting would be permitted. Dogs are not allowed when hunting deer and feral hogs. In addition, no rifles or crossbows will be allowed – shotguns are allowed.

**(e) Why is the use being proposed?**

Annual hunting of white-tailed deer is often necessary to minimize population growth due to the species’ high reproductive potential. The presence of an established deer herd in poor (barrier island) habitats at Back Bay NWR requires hunting of the herd because of the poor soils and very limited forage. This herd has been hunted since 1986; an approach that has since maintained a constant population size, healthy individuals, and minimized habitat damage. Non-native feral hogs root in soft wetland soils, eating the roots and tubers of waterbird food-plants and decreasing the quantity and quality of plant material available to native animals and migratory waterfowl. Hog rooting along dike slopes increases the potential for erosion. Additionally, hogs would opportunistically eat birds, nestlings, reptiles, amphibians and small mammals.

Providing additional hunting in the new hunt zones is primarily for habitat management purposes. Wildlife biologists generally agree that any deer herd needs to be hunted to properly manage habitats and retain disease-free or otherwise healthy deer. Habitats subject to deer damage include forest under story and shrub habitat that migratory songbirds depend on for food resources. Heavily-browsed vegetation leaves less food and cover habitat for neotropical migratory birds. Reducing browse would also provide additional food and cover for species such as small mammals, reptiles and invertebrates.

Due to the rise in development, deer populations have encroached on residential areas as well as damage crops from local farmers who live adjacent to the Refuge property. Providing a hunt will support one of the “Big 6” activities in the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57) and, if compatible, is to receive enhanced consideration in refuge planning. Controlled hunting keeps the deer population within a healthy carrying capacity of the habitat.

**AVAILABILITY OF RESOURCES:**

Back Bay NWR incurs the bulk of the cost for implementing the hunt program in staff time to administer the hunt each day and to coordinate with our partners. Staff costs have been reduced greatly since partnering with VDGIF to administer the lottery process, which is no cost to the Refuge. To expand hunting to the new zones, there will be start-up costs to clear parking areas and post signs; however, this cost (included below) is within the existing budget and staff resources of the Refuge. Costs associated with administering this use include:

- ☒ Senior Refuge Biologist (GS-12) and/or GS-09 Refuge Biologist - 6 weeks/yr. = **\$9,600**
- ☒ Visitor Services Manager (GS-12) and/or GS-09 Refuge Operations Specialist – 6 weeks/yr. = **\$9,600**
- ☒ Deputy Refuge Manager (GS-13) – 1 week/yr. = **\$1,875**
- ☒ Refuge Manager (GS-14) - 1 week/yr. = **\$2,088**



- ☒ Law Enforcement Officer (GS-09) - 1.5 weeks/yr. = **\$1,575**
- ☒ Maintenance Worker (WG-10) - 3 weeks at start-up of new hunt zones = **\$2,850**;  
1 week/yr. thereafter = **\$950**

In addition volunteer hours ranging from 50 to 60 hours contributing approximately \$1,000.00.

Anticipated Impacts of the Use: The purposes of the Refuge is to provide habitat for migrating wintering waterfowl, particularly greater snow geese, to protect wetlands, preserve habitat for water birds, and improve water quality in Back Bay. Conducting the hunt will not impact waterfowl use of the high quality habitat found in the impoundments or adjacent marshes. Populations of most migratory birds are low at this time of the year. Some disturbance occurs to waterfowl, but it is offset by the benefits of a healthy deer herd that is smaller and is not consuming large quantities of waterfowl food plants. Disturbance to endangered species has not been noted at the refuge. A Section 7 consultation was prepared and approved on the hunt program in 1985.

Habitats subject to deer damage include forest under story and shrub habitat that migratory songbirds depend on for food resources. Heavily-browsed vegetation leaves less food and cover habitat for neotropical migratory birds, a trust resource which the Refuge is charged with protecting. Controlled hunting keeps the deer population within the carrying capacity of the habitat.

Modifying the hunt program to further reduce the deer population would then reduce the browse effects on vegetation. This would enable the forest understory to grow and produce more food and cover for neotropical migrants. It would also provide additional food and cover for species such as small mammals, reptiles and invertebrates.

Some wildlife disturbance and trampling of vegetation would occur from deer and hog hunters walking around in their zones. During the hunt, the Refuge is completely closed to public use. This causes some conflicts with other users; however, benefits are greater by keeping a healthy deer population. Expansion of the hunt will increase the time some visitors would be unable to use the refuge, although the losses of these visitors during some days from October to December may be offset by increased visitation with hunters. Shotgun noise from hunting could cause some wildlife disturbance. Hunting provides game meat and recreation for hunters. Hunters who come from outside the local area may contribute to the local economy by staying at local hotels and eating in local restaurants.

#### **PUBLIC REVIEW AND COMMENT:**

As part of the CCP process for Back Bay NWR this compatibility determination was made available for a 30-day public review and comment period with the release of the Draft CCP/EA.

#### **DETERMINATION (CHECK ONE BELOW):**

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

### STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

The hunt program is managed in accordance with Federal and State regulations. The deer hunt will be reviewed annually to ensure deer management goals are achieved. Both the deer and feral hog hunts would be reviewed annually to ensure the program is providing a safe, high quality hunting experience for participants. The Annual Hunt Plan must be approved by Regional Office supervisors. Hunt season dates, limits and/or number of hunters per day would be adjusted as needed to achieve balanced wildlife population levels within carrying capacities.

To mitigate user conflicts that arise when we close the Refuge to other public use, we would issue news releases and post information at the Visitor Center to notify visitors of closings. We maintain safe deer and feral hog hunts by limiting the number of hunters per zone and by establishing a buffer zone around Refuge residence buildings.

### JUSTIFICATION:

Hunting is a wildlife-dependent priority public use with minimal impact on Refuge resources. Hunting is consistent with current Service policy on hunting, the National Wildlife Refuge System Improvement Act of 1997, and the broad management objectives of the National Wildlife Refuge System. Hunting will not materially interfere with or detract from the purposes of the refuge or the mission of the National Wildlife Refuge System. The Refuge currently is meeting deer management and visitor services objectives on the barrier spit by providing this hunt. Hunting in new zones is needed to meet those same objectives on other areas of the Refuge. This use has been determined to be compatible provided the stipulations necessary to ensure compatibility are implemented, and the use does not exceed thresholds necessary for visitor safety and resource protection.

Signature: Refuge Manager  9/1/2010  
(Signature and Date)

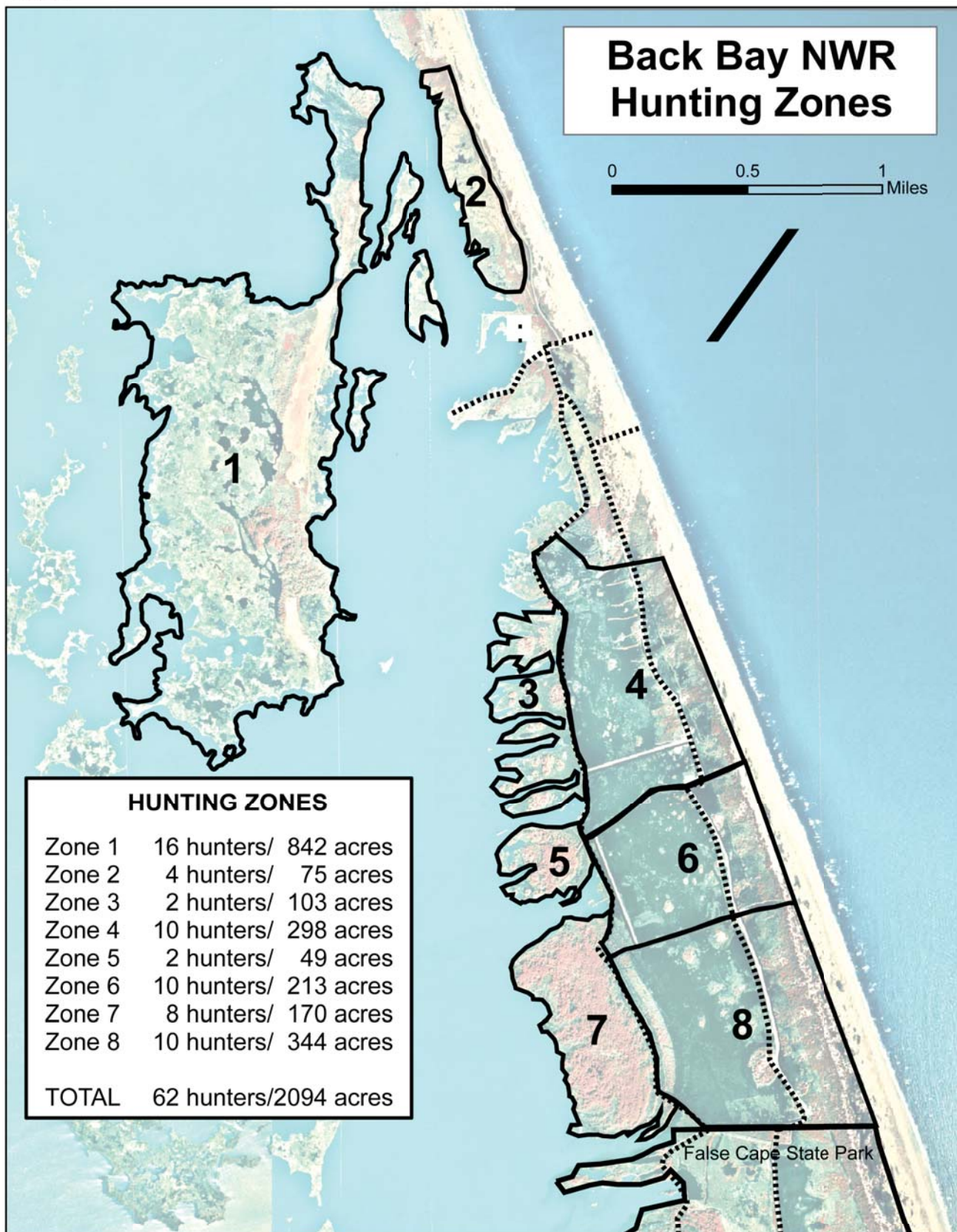
Concurrence: Regional Chief  09/16/2010  
(Signature and Date)

Mandatory 15-year re-evaluation date: 09/16/2025  
(Date)



Map A-3

Compatibility Determination - White tailed Deer and Feral hog Hunting

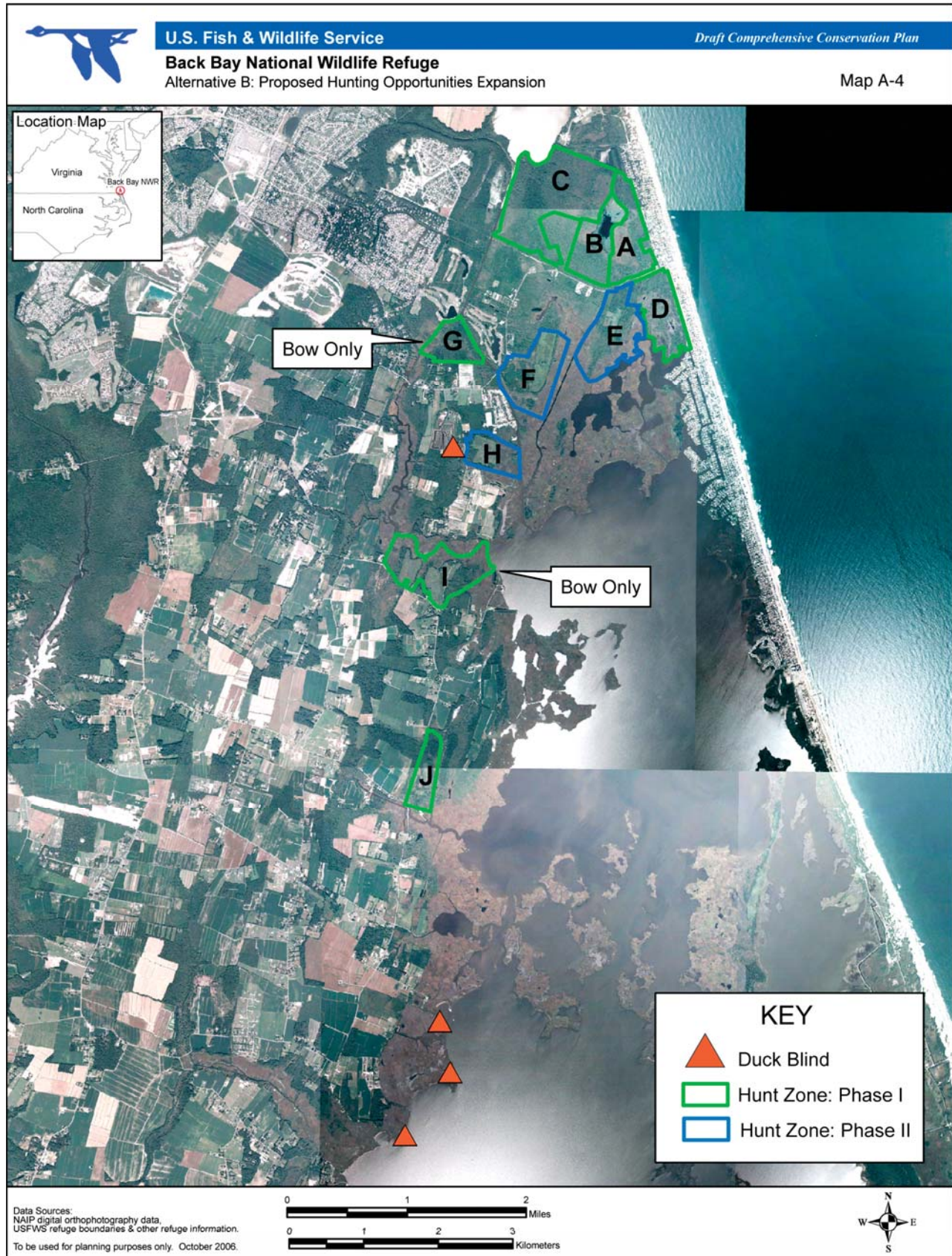


Back Bay NWR GIS Lab, June 2006

Draft Comprehensive Conservation Plan &amp; Environmental Assessment



Appendix A: Findings of Appropriateness and Compatibility Determinations



Back Bay National Wildlife Refuge

## **COMPATIBILITY DETERMINATION**

**USE:** Waterfowl Hunting

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

National Wildlife Refuge System Administration Act of 1996, as amended by the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 6688dd, et seq.)

### **REFUGE PURPOSES**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is this use? Is it a priority public use?**

The use is waterfowl hunting. Waterfowl hunting is a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997.

#### **(b) Where would the use be conducted?**

There is a waterfowl hunting program in two areas within the Refuge. One waterfowl hunting area is Redhead Bay, located south of the Presidential Proclamation area. There are three sites within this area, located on Back Bay at Tracts 229, 217, and 214-I. The second waterfowl hunting area is the Frank Carter impoundment on Colchester Road (Map A-5). We also provide support for a waterfowl hunt at False Cape State Park by providing parking on the Refuge.



**(c) When would the use be conducted?**

Waterfowl hunting opportunities in Redhead Bay is allowed Opening Day, Monday, Wednesday, Saturday, and some holidays during the State-designated seasons. Actual season dates change annually, but typically run from September through March. This schedule coincides with the existing State-administered waterfowl hunting program on Back Bay (Attachment A.1). At the Frank Carter impoundment, an annual one-day, youth waterfowl hunt occurs on the State-designated date within the season. Hunting is allowed from 1/2 hour before sunrise until 1:00p.m.; except during the snow goose season, which is until sunset, and unless safety or overriding resource concerns would make hunting incompatible.

**(d) How would the use be conducted?**

This hunting program is administered according to State, Federal, and Refuge regulations. At Redhead Bay, the three locations are designated by a ground stake that accommodate temporary (i.e. float/boat) waterfowl hunting blinds. The youth hunt at the Carter impoundment would involve constructing one stationary blind for hunters. These hunt blind locations are incorporated into the managed/quota waterfowl hunt programs administered by the VA Department of Game and Inland Fisheries (VDGIF). See attachment A.1 for specific information on their programs. Hunters register to hunt these blinds through VDGIF and receive a selection notice permitting them to hunt these areas. Hunters are allowed a specified number of companions (2 to 4). Law enforcement personnel conduct official checks to ensure compliance with all regulations.

Dogs are allowed during waterfowl hunts for retrieval purposes to reduce crippling loss.

**(e) Why is this use being proposed?**

There is a tremendous amount of waterfowl hunting history in Back Bay; however, waterfowl hunting was prohibited on the original Refuge boundary by Presidential Proclamation in 1939. Hunting is a priority public use under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997. This use is being proposed because it provides new and additional public use opportunities on the Refuge without conflicting with the Refuge purpose.

**AVAILABILITY OF RESOURCES**

Implementing this proposed hunt program is within the resources available in our station budget because our partner agency, VDGIF, are administering the majority of the program. Refuge staff coordinate and participate in interagency meetings to establish the program and assist in constructing the stationary blind at the Carter impoundment. Conducting compliance checks is within the regular duties of the Station Law Enforcement Officer. Anticipated start-up and annual costs are as follows:

- ☒ Senior Refuge Biologist (GS-12) and/or GS-09 Refuge Biologist (coordinate with State,



assist implementation, etc.) - 1 week start-up = **\$1,600**; 2 days/yr. after start-up = **\$650**

- ☒ Visitor Services Manager (GS-12) and/or GS-09 Refuge Operations Specialist (coordinate with State, assist with implementation, web site, etc.) - 1 week start-up = **\$1,600**; 2 days/yr. after start-up = **\$650**
- ☒ Deputy Refuge Manager (GS-13) (review proposals, budgeting, housing and vehicle coordination, etc.) - 2 days start-up = **\$750**
- ☒ Refuge Manager (GS-14) (coordination, etc.) - 2 days start-up = **\$830**
- ☒ Maintenance Worker (WG-09) (construct and maintain blind) - 2 weeks start-up = **\$1,900** startup; 1 week/yr. after start-up = **\$950**
- ☒ Law Enforcement Officer (GS-09) (enforcement patrols) 2 weeks/yr. = **\$2,100**

## **ANTICIPATED IMPACTS OF THE USE**

There will be minimal trampling of emergent vegetation and bottom substrates in and around the blinds. Unethical hunters pose the risk of increased litter, and could cut vegetation to make blinds and pollute waters by shooting unapproved lead shot. There will be no significant impact on waterfowl population levels, as sustainable harvest rates are pre-determined by Federal law. Dogs allowed for retrieval purposes to reduce crippling loss will be under the control of the hunter, thus reducing the chance to injure or harass non-target wildlife species, and will therefore not diminish the quality of experience for other visitors or hunters. At the Carter impoundments, this use may pose a conflict with adjacent landowners due to early morning gunfire.

Duck hunting has the potential of impacting other waterfowl, shore birds, marsh birds, and other migratory bird populations feeding and and/or resting near the designated area(s). Human disturbance to migratory birds has been documented in many different locations. The presence of hunters will decrease nesting behavior and increase alert and escape behavior for some of these various species.

Under this action, Back Bay NWR estimates a maximum additional 30-45 ducks, and 15-25 geese will be harvested each year. This harvest impact represents less than one-tenth of a percent of Virginia's average harvest. Liberal duck seasons (75 days, 5 bird bag limit) and resident goose seasons have resulted in high waterfowl harvests in Virginia during the past several years. Harvest has averaged ~150,000 ducks and ~60,000 geese from 2000 - 2005, compared to 115,000 ducks and 25,000 geese during the 1990's (USFWS. 2007. Migratory bird hunting activity and harvest during the 2005 and 2006 hunting seasons: Preliminary estimates. <http://www.fws.gov/migratorybirds/reports/reports.html>). The long season length and liberal bags offer greater opportunity and a greater cumulative harvest over the course of the season.

Opening Refuge lands to public use can often result in littering, vandalism, or other illegal activities on the Refuge. Focused law enforcement patrols during hunting season help to mitigate this possibility.

The positive impact provides additional hunting opportunities, especially to youth hunters, and for the first time for waterfowl hunters.

Impacts may be minor when we consider them alone, but may be important when we consider them collectively. Our principal concern is repeated disruption of nesting, resting, or foraging birds, and public safety concerns related to firearms use when hunting. Our knowledge and observations of the affected area(s), and of properly managed hunting activity shows no evidence that this activity will adversely affect the wildlife resource. Although we do not expect substantial cumulative impact from this activity in the near term, it will be important for the Refuge staff to monitor this use, and, if necessary, respond appropriately to conserve high quality wildlife resources.

## **PUBLIC REVIEW AND COMMENT**

As part of the CCP process for Back Bay NWR this compatibility determination was made available for a 30-day public review and comment period with the release of the Draft CCP/EA.

## **DETERMINATION (CHECK ONE BELOW):**

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

## **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY**

All Federal, State, and Refuge regulations must be followed by all hunters. This waterfowl hunting opportunity is only compatible if administered in cooperation with VDGIF because the Refuge does not have the staff to administer the program alone.

## JUSTIFICATION

Hunting is a priority public use. Waterfowl hunting has not been allowed on Back Bay NWR because of Presidential Proclamation in 1939, one year after the Refuge was established. With additional bay-front property acquired, outside the Proclamation Boundary, providing waterfowl hunting opportunities is now possible. VDGIF is very supportive of this proposal and will administer 90% of the program. This activity will not materially interfere with or detract from the mission of the NWRS or purposes for which Back Bay NWR was established. This use has been determined to be compatible provided the stipulations necessary to ensure compatibility are implemented, and the use does not exceed thresholds necessary for visitor safety and resource protection.

Signature: Refuge Manager  9/1/2010  
(Signature and Date)

Concurrence: Regional Chief  09/16/2010  
(Signature and Date)

Mandatory 15-year re-evaluation date: 09/16/2025  
(Date)

## ATTACHMENT A.1

### Draft Virginia Department of Game and Inland Fisheries Waterfowl Hunting Programs (with edits to include Back Bay NWR)

<http://www.dgif.virginia.gov/hunting/managedhunts/>

#### **Princess Anne WMA Float Blind September Canada Goose/Teal Hunts and October Waterfowl**

Hunt September Canada geese/teal and waterfowl (during the October waterfowl season) on the designated waters of Back Bay in Virginia Beach. The area's 51 float blind stakes are available to float blind hunters on a first come, first served. Hunters are not allowed to tie float blinds to stakes before 5:00 AM. Half-day (until 1:00 PM) hunting allowed on Opening Day, Mondays, Wednesdays, Saturdays and State Holidays. It is recommended that each hunting party visit the hunting area prior to the season to locate boat access, blind stakes, and scout the area in general. You must be familiar with the area to locate the blind stakes before shooting time. Dogs are allowed and recommended.

- ☒ **Hunt days:** Opening Day, Mondays, Wednesdays, Saturdays and State Holidays.
- ☒ **Hunt dates:** Refer to above web site for specific hunt dates.
- ☒ Hunters may not tie up to blind stakes until 5:00 AM.

#### **Princess Anne WMA Late Snow Goose Hunts**

This is an opportunity for float blind hunters to hunt snow geese on the designated waters of Back Bay after the general duck season. The blind stakes in Back Bay are available for snow goose hunting after the general duck season. These hunts will be permitted after the general duck season and will be on a first come, first served basis. Daily hunting times will be ½ hour before sunrise to sunset.

- ☒ **Season dates:** Refer to above web site for specific hunt dates.

#### **Back Bay NWR - Youth Waterfowl Day**

This is an opportunity for youth to hunt waterfowl at the Carter Impoundment on Back Bay NWR. The Service, in cooperation with VDGIF, will host a youth waterfowl hunting day annually during the month of October. Only youths may hunt and carry a firearm, and must be accompanied by a legal guardian. All youth hunters are to be registered for this event. To register, contact Back Bay NWR at 757-721-2412. There are no decoys provided for these hunts. Dogs are allowed and recommended for retrieval purposes.

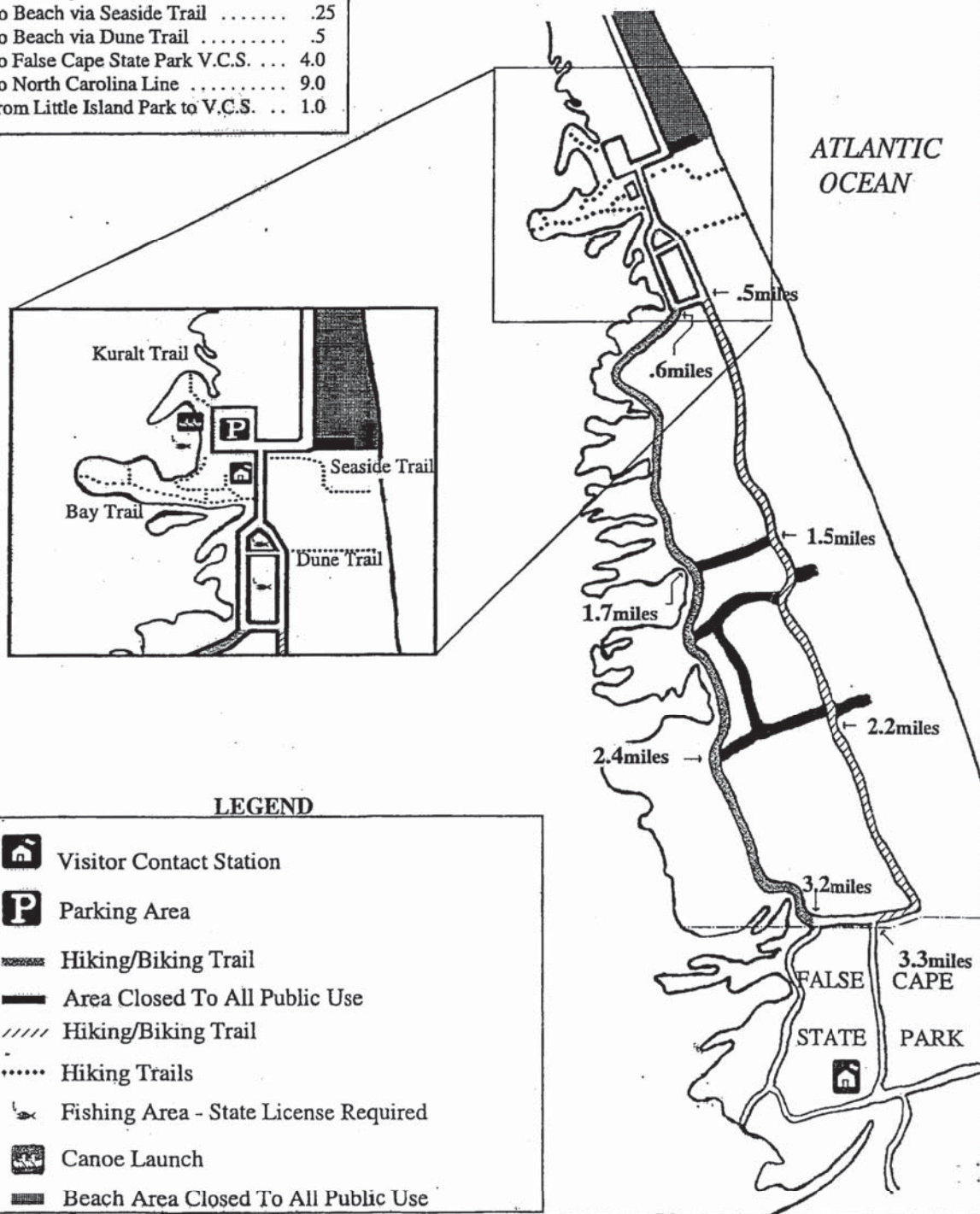
## Appendix A: Findings of Appropriateness and Compatibility Determinations

# Back Bay National Wildlife Refuge

Map A-5

## One-way Mileage from V.C.S.

End of Bay Trail .....	.4
To Beach via Seaside Trail .....	.25
To Beach via Dune Trail .....	.5
To False Cape State Park V.C.S. ...	4.0
To North Carolina Line .....	9.0
From Little Island Park to V.C.S. ...	1.0



Back Bay National Wildlife Refuge



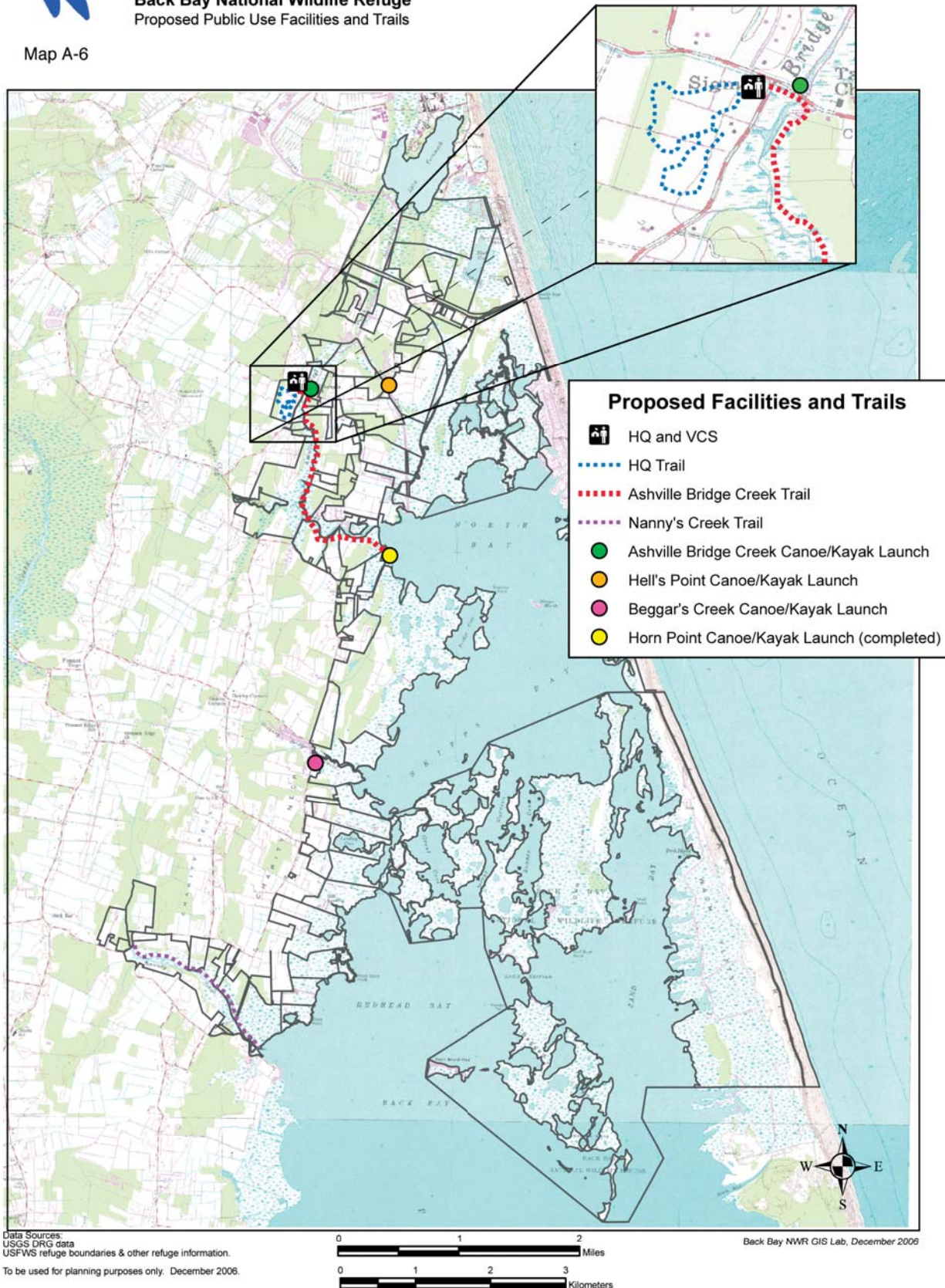
Compatibility Determination – Operation of Visitor Contact Station and Public Parking



**Back Bay National Wildlife Refuge**  
Proposed Public Use Facilities and Trails

*Draft Comprehensive Conservation Plan*

Map A-6



Draft Comprehensive Conservation Plan & Environmental Assessment



## **COMPATIBILITY DETERMINATION**

**USE:** Freshwater and Saltwater Fishing and Crabbing

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

National Wildlife Refuge System Administration Act of 1996, as amended by the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 6688dd, et seq.)

### **REFUGE PURPOSES**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... The conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is this use? Is it a priority public use?**

The use is fresh and saltwater fishing and crabbing, which is a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997.

#### **(b) Where would the use be conducted?**

Fishing and crabbing occurs on the Refuge at the designated fishing area in Back Bay, which is in front (west) of the headquarters, along the beach (excluding the North Mile closure area), and in D Pool.

Fishing will be permitted at the Horn Point Canoe/Kayak Launch Site, located on Horn Point Road, on the west side of Back Bay. In addition, future lands acquired and deemed appropriate for recreational fishing will be evaluated for compatibility by amending this determination.

Fishing/Crabbing is prohibited in the Refuge impoundments south of the maintenance compound, from the dikes into Back Bay in that same area, and from any other Refuge property.

**(c) When would the use be conducted?**

The Refuge is open to public fishing/crabbing in the above designated area, including the future Horn Point site, during standard Refuge hours of one-half hour before sunrise to one-half hour after sunset. The Refuge also participates and promotes two “Kids Fishing Days Events” annually; one in April and one on the first Saturday in June to support National Fishing and Boating Week.

The Refuge will allow individuals to night-time surf fish on the beach, under a Special Use Permit. Although select weeks will be permitted, this use will be restricted to the months of October through February. All participants will be required to enter the Refuge prior to closure of the entrance gate, around sunset, and hours of fishing will also be restricted in accordance with available staff resources (proposed until 12:00 midnight or 2:00 a.m.). Night-time surf fishing will not be allowed unless and until the Refuge’s current access regulations as expressed in 50 CFR 26.34 are changed to permit such access.

This use will not be allowed unless and until the Refuge’s current access regulations as expressed in 50 CFR 26.34 are changed.

**(d) How would the use be conducted?**

Visitors are free to fish/crab in designated areas as this activity is deemed wildlife oriented and is promoted within the U.S. Fish and Wildlife Service, nationwide. Visitors are required by Virginia regulations to maintain a current fishing license (unless exempt), except for the “Virginia Free Fishing Weekend,” and follow all Virginia fishing/crabbing regulations. The Refuge may impose stricter regulations as deemed necessary to maintain fish populations on Refuge lands.

While the Refuge allows fish to be removed from these areas, catch and release is promoted by many of the fisherman using these areas. Visitors would supply their own fishing/crabbing gear, bait, and access to the open areas. The special Kids Fishing Day events are administered in cooperation with the State of Virginia, the local chapter of the Izaak Walton League and other local vendors.

The night-time surf fishing activity will be controlled through conditions listed on a required Special Use Permit and through strict enforcement by Refuge staff. Each individual will purchase a permit for this use and produce it upon request when participating in this use. For safety purposes, only individuals 16 years of age and older can obtain a permit. Applicants under 18 shall have a legal parent or guardian apply for and sign the permit. Participants shall adhere to safety precautions outlined in the permit, particularly the use of a reflective vest or other suitable reflective material to be worn above the waist. Permittees of the beach Motor Vehicle Access Permit Program shall have priority use on the beach. Permits are subject to revocation for violation of the terms of the permit.

**(e) Why is this use being proposed?**

Fishing and crabbing is a current use on the Refuge and is an appropriate activity. Refuge expenses are very minimal aside from already existing standard law enforcement patrols to verify regulations are being followed. Also, our fishing events promote this wise use through environmental education and interpretation. This use supports wildlife dependent recreation as outlined in the Improvement Act.

Service policy (605 FW 3.6(G)) requires that if a Refuge is not generally open after sunset, the decision to allow night fishing must be based on specific refuge objectives and not just on historic use. Goal 6 of the Draft CCP/EA is to “provide and expand hunting and fishing opportunities to the public where compatible with Refuge purposes” and a stated objective in the Service-preferred alternative expresses that “within 5-7 years of CCP approval, expand high-quality fishing opportunities on the Refuge.” Allowing night time surf fishing under the conditions specified above will increase high-quality fishing opportunities for the public and thereby help meet Refuge objectives.

## **AVAILABILITY OF RESOURCES**

Permitting the general fishing/crabbing use is within the resources available to administer our Visitor Services Program. The funding received by the Refuge is adequate to continue to administer this program and to ensure that the use remains compatible with the Refuge purposes. The use of the area specified for fishing is a small area, where cost effective administration of the program can occur. Compliance with fishing regulations is handled within the regular duties of the Station Law Enforcement Officer. Anticipated additional costs for special fishing events:

- ☒ Senior Refuge Biologist (GS-12) and/or GS-09 Refuge Biologist (review request) - 1/2 day/yr. = **\$175**
- ☒ Visitor Services Manager (GS-12) and/or GS-09 Refuge Operations Specialist (coordinate with entity, process) - 2 days/yr. = **\$650**
- ☒ Refuge Manager (GS-14) (review and approval) – 1/4 day/yr. = **\$104**
- ☒ Law Enforcement Officer (GS-09) (enforcement patrols) 1 day/yr. = **\$208**

Implementing the night-time surf fishing will require additional resources, due to being highly managed. Back Bay NWR incurs the bulk of the cost in staff time to administer the use each day; however, this cost (included below) will be offset by each \$35 use fee generated by this Program. Costs associated with administering night-time surf fishing include:

- ☒ Visitor Services Manager (GS-12) and/or GS-09 Refuge Operations Specialist – 4 weeks/yr. = **\$6,400**
- ☒ Deputy Refuge Manager (GS-13) – 1 week/yr. = **\$1,875**
- ☒ Refuge Manager (GS-14) - 1 week/yr. = **\$2,088**
- ☒ Law Enforcement Officer (GS-09) - 4 weeks/yr. = **\$4,200**
- ☒ Administrative Assistant (GS-06) – 1 week/yr. = **\$900**

## **ANTICIPATED IMPACTS OF THE USE**

While the day-to-day activity of fishing/crabbing is considered a consumptive use on the Refuge, there are still few adverse impacts from the use. While some fish/crabs are lost to the system, they are renewable resources that will be replenished. Additionally, it has been found the majority of people fishing in D Pool are catch and release fisherman. There is no significant impact on migratory birds due to the small number of fish that are removed from the Refuge through the public fishing program, and while fishing may cause other wildlife disturbances, these impacts are minimal and temporary.

Allowing night-time surf fishing could potentially impact migratory shore birds and nesting sea turtles. These impacts have been reduced for shorebirds and eliminated for sea turtles by restricting this use to periods outside the peak migration and nesting seasons, respectively. There is the possibility of increased disturbance to dune habitats; however, regular patrols and enforcement of this closed area will be implemented. No other adverse impacts are anticipated.

## **PUBLIC REVIEW AND COMMENT**

A public notice of availability was issued soliciting public review and comment for 14 days. It was sent to the Virginia Pilot local newspaper, posted in the Visitor Contact Station, and submitted to various fishing interest groups. Four responses were received, all in support of the proposed fishing program.

In addition, the Refuge held a public meeting on the proposed night fishing activity on January 31, 2007. Further written comments were accepted until March 2, 2007. Forty-five (45) written comments were received with 37 in support of the new activity and five opposing. Comments from the opposing public include: the activity will interfere with the primary purpose of the Refuge, will divert resources, and cause security issues (3); will cause night public use issues such as fires, alcohol, firearms, litter, and wildlife harassment (2); and, will threaten dune protection and cause habitat erosion. Limiting impacts from these issues are addressed above.

## **DETERMINATION (CHECK ONE BELOW):**

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

## **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY**

Maintain closed areas which allow for migratory birds to still feed in closed impoundments. Do not allow motorized access for fishing except as designated for handicapped parking near D and E impoundments.

In addition to the above, the night-time surf fishing use will have many stipulations, including but not limited to:

- ☒ Each individual will purchase a permit for this use and produce it upon request when participating in this use.
- ☒ Only individuals 16 years of age and older can obtain a permit. Applicants under 18 shall have a legal parent or guardian apply for and sign the permit.
- ☒ Participants shall adhere to safety precautions outlined in the permit, particularly the use of a reflective vest, or other reflective item and lit lanterns.
- ☒ Permittees of the beach Motor Vehicle Access Permit Program shall have priority use on the beach.
- ☒ No dogs or other pets, alcohol, or campfires are permitted.
- ☒ All permittees must be actively fishing.



- ☒ No camping, cooking, tents, or any other structure except a beach chair.
- ☒ Distance from the surf line where participants can set up and fish will be stipulated in the Special Use Permit.
- ☒ Permits are subject to revocation for violation of the terms of the permit.

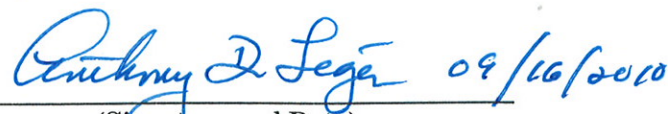
## JUSTIFICATION

Fishing is an appropriate wildlife-dependent use of Refuge resources. It has been a long standing tradition in the Region, and while the Refuge does maintain areas open to public fishing and crabbing, it still maintains certain areas closed. These closed areas assist in providing the quality food source for migratory waterbirds that depend on the fish and crabs for survival.

The U.S. Fish and Wildlife Service and Back Bay National Wildlife Refuge promote fishing/crabbing as a viable wildlife oriented recreational activity. The Refuge also promotes this activity through two annual “Kids Fishing Day” events, which are in line with the environmental education and wildlife oriented recreational activities for today’s youth. These days provide an opportunity to educate the children in how to fish, provide for an opportunity to learn about nature, the Refuge system, and enhance ethical fish behavior at a young age. This activity can also build or strengthen a bond between friends and family and enhance both individual’s knowledge about the natural ecosystem provided and why it is important to protect them. Fishing opportunities, including nighttime surf fishing, will promote public appreciation and support for the refuge, and help achieve Refuge goals and objectives.

This use has been determined to be compatible provided the stipulations necessary to ensure compatibility are implemented, and the use does not exceed thresholds necessary for visitor safety and resource protection. We do not expect this use to materially interfere with or detract from the mission of the National Wildlife Refuge System, nor diminish the purposes for which the refuge was established. It will not pose significant adverse effects on Refuge resources, nor interfere with public use of the Refuge, nor cause an undue administrative burden.

Signature: Refuge Manager  9/1/2010  
(Signature and Date)

Concurrence: Regional Chief  09/16/2010  
(Signature and Date)

Mandatory 15-year re-evaluation date: 09/16/2025  
(Date)

**FINDINGS OF APPROPRIATENESS AND COMPATIBILITY DETERMINATIONS FOR  
THOSE SECONDARY USES FOUND TO BE APPROPRIATE**

- ☒ Operation of Visitor Contact Station and Public Parking
- ☒ Walking/Hiking
- ☒ Bicycling
- ☒ Launching of Non-Trailerred Vessels
- ☒ False Cape State Park Access (through Refuge)
- ☒ Biological Research
- ☒ Outdoor Events
- ☒ Ground Military, Police and Fire Training
- ☒ Commercial Filming/Photography
- ☒ Weddings and Other Ceremonies
- ☒ Parking and Connecting Access to Horseback Riding
- ☒ Cooperative Farming\*  
\* *(this compatibility determination was approved on March 2, 2007)*

**FINDING OF APPROPRIATENESS OF A REFUGE USE**Refuge Name: Back Bay NWRUse: Operation of Visitor Contact Station and Public Parking

This exhibit is not required for wildlife-dependent recreational uses, forms of take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	X	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?	X	
(h) Will this be manageable in the future within existing resources?	X	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	X	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

Where we do not have jurisdiction over the use ("no" to [a]), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to [b], [c], or [d]) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes X No       

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate        Appropriate X

Refuge Manager: [Signature] Date: 9/1/2010

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: [Signature] Date: 9/2/2010

**A compatibility determination is required before the use may be allowed.**



**JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Operation of Visitor Contact Station and Public Parking

**NARRATIVE**

Operation of the visitor contact station and public parking are a means to facilitate priority public uses of environmental education and interpretation (VCS operation), and wildlife observation and photography (parking). These uses directly support the mission of the FWS, NWRS and the Refuge, does not have negative impacts on the Refuge mission, and does not require additional resources to allow.

## **COMPATIBILITY DETERMINATION**

**USE:** Operation of the Visitor Contact Station and Public Parking

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

### **REFUGE PURPOSES**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is this use? Is it a priority public use?**

The uses are operation of the Visitor Contact Station (VCS) and public parking. VCS operation supports and provides opportunities for priority public uses (environmental education and interpretation), as identified in the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997. Although vehicle parking in designated areas is not a priority public use, this activity also facilitates priority public use opportunities (wildlife observation and photography).

#### **(b) Where would the use be conducted?**

Refuge Barrier Spit (Northern/Public Use Zone) (Map A-6): This developed area comprises approximately 280 acres, and serves more than 110,000 visitors annually. This area includes a Visitor Contact Station (VCS) with 50-car visitor parking lot and wildlife viewing scopes, a canoe/kayak launch, and a fee collection station at the Refuge entrance. Future plans include relocation of the Refuge entrance station and additional parking at the entrance area for approximately 20 cars.

Refuge West Side (Map A-7): The Asheville Bridge Creek Environmental Education Center (ABCEEC) is a 1,800 square foot converted home on a 17-acre parcel that hosts group visitors on an appointment basis. It provides environmental education, interpretation, and parking for the indoor and outdoor classroom activities. The Horn Point Canoe/Kayak Launch Facility provides public parking for launching canoes/kayaks and for wildlife observation and photography. There is a parking area at the Frank Carter Impoundment on Colchester Road, which supports pedestrian activities.

We have future plans to construct a new Refuge Headquarters and Visitor Contact Station (HQ/VCS) on Tract #244 at the corner of Sandbridge Road and New Bridge Road; two thoroughfares that bisect the Refuge. The new facility will be a standard, medium-sized design of approximately 10,500 square feet. Located here will be a maximum 100-car parking lot. The facility will provide environmental education, interpretation, and interior and exterior interpretive displays. This proposed public use area comprises approximately 61.5 acres, and is expected to serve more than 150,000 visitors annually. Once the new facility is constructed, we also propose to convert a Refuge house (Tract #135) into an environmental education center and utilize the existing ABCEEC as a maintenance facility.

Three additional canoe/kayak launch sites are planned to be constructed on the west side, which will provide public parking to also facilitate wildlife observation and photography (Map A-7). These new sites are discussed in detail in a separate Compatibility Determination (see Boat Launching).

**(c) When would the use be conducted?**

Refuge Barrier Spit (Northern/Public Use Zone): Currently the VCS is open seven days per week from April 1 through October 31, and closed on Sunday between November 1 and March 31. Public parking is allowed year-round, one-half hour before sunrise to one-half hour after sunset. A temporary closure to these activities would be implemented during any scheduled Refuge hunt dates.

Refuge West Side: The ABCEEC site is for educational and other organized group visits, by reservation only, for the purpose of environmental education, wildlife viewing, and wildlife photography. Vehicle parking for pedestrian activities at the ABCEEC and the Frank Carter impoundment area are open year-round from one-half hour before sunrise to one-half hour after sunset. The Horn Point Canoe/Kayak Launch Site will be open from April 1 through October 31 annually, from one-half hour before sunrise to one-half hour after sunset. The new HQ/VCS on Tract #244 will follow the newly proposed hours of operation; seven days per week from April 1 through October 31 and closed on Sunday instead of Saturday between November 1 and March 31. The newly converted environmental education center on Tract #135 will operate the same as the current ABCEEC. Facilities on the west side would remain open during hunts, as they are not located near any hunt zones.

**(d) How would the use be conducted?**



Such activities are allowed in areas and in buildings that have been designed to accommodate such uses. These uses are conducted for the general public, as well as for organized groups, including schools and scout groups. Groups of 10 or more are required to have permission to visit the Refuge for these activities, and a seasonal entrance fee from April 1 through October 31 will be charged to all, with the exception of canoe/kayak launches, the Frank Carter impoundment area, and for school groups, scouts on merit badge projects assignments, or children under 16 years of age. There is a mix of personal and non-personal program delivery, including interpretive signing, audio-visual presentations, brochures, special events, guided walks and talks, exhibits, web site information, and informal visitor information contacts.

**(e) Why is the use being proposed?**

Vehicle parking facilitates use for participating in priority public uses. Public vehicle access is limited to the roads and parking areas that have been developed at the specific sites identified above. Future road and parking areas will be designed to maximize resource protection, while providing safe and convenient access to the visitor center. Creation of additional parking at the entrance station will accommodate parking for visitors or the public to observe wildlife and photograph. These visitors are often hikers and bikers.

**AVAILABILITY OF RESOURCES:**

The resources necessary to provide and administer these uses, at current use levels, is available within current and anticipated Refuge budgets. Staff time associated with administering this use is related to assessing and conducting parking and VCS maintenance, including kiosks, gates and signs, monitoring potential impacts of the use on Refuge resources and visitors, and providing information to the public about the use.

The Visitor Services Manager is available for public outreach. A Park Ranger will monitor visitor use and user interactions. The Park Ranger will conduct law enforcement activities to provide for visitor safety and resource protection. Maintenance staff performs the regular maintenance and repairs.

**ANTICIPATED IMPACTS OF THE USE:**

The presence of humans and cars has the potential of impacting shorebird, waterfowl, marshbirds and other migratory bird populations feeding and resting near the trails and on beaches during certain times of the year. Disturbing wildlife typically results in a temporary displacement without long-term effects on wildlife individuals or populations. Some species will avoid the areas people frequent, such as the parking areas and the buildings, while others seem unaffected by or even drawn to the presence of humans. Overall, those effects should not be significant.

Opening Refuge lands to this public use can often result in littering, vandalism, or other illegal activities. Our knowledge and observations of the affected areas show no evidence that these uses cumulatively will adversely affect the wildlife resource. Although we do not expect substantial impact from these uses in the near term, it will be important for Refuge staff to monitor those uses and, if necessary, respond to conserve high-quality wildlife resources.

Future parking at the newly proposed headquarters/visitor contact station site will be accomplished on a previously disturbed agricultural site. Creating additional parking at the entrance station will occur in an area that has already been developed primarily to accommodate priority public uses. Therefore, little wildlife value will be lost due to newly proposed construction projects.

#### **PUBLIC REVIEW AND COMMENT:**

As part of the CCP process for Back Bay NWR this compatibility determination was made available for a 30-day public review and comment period with the release of the Draft CCP/EA.

#### **DETERMINATION (CHECK ONE BELOW):**

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

#### **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

No off-road or off-trail access will be permitted, except for emergency or administrative purposes, for the current motor vehicle access permit program for North Carolina residents, and for hunters.

Groups of 10 or more will be required to have permission to visit the Refuge for these activities, and a seasonal entrance fee from April 1 through October 31 will be charged to all, with the exception of school groups, scouts on merit badge projects assignments, or children under 16 years of age.

**JUSTIFICATION:**

These uses provide compatible educational and recreational opportunities for visitors to enjoy Refuge resources, and improve their understanding and appreciation of fish and wildlife, ecology, refuge management practices, and the relationship of plant and animal populations in the ecosystem. Refuge visitors will better understand the Service's role in conservation, and opportunities, issues, and concerns faced in management of our natural resources. Further, they will understand the impact that human presence, disturbance, and/or consumption can cause to these resources. Likewise, these uses will provide opportunities for visitors to observe wildlife habitats firsthand, and learn about wildlife and wild lands at their own pace in an unstructured environment. Authorization of these uses will result in a greater constituency for achieving Refuge goals, and, ultimately, the Service mission.

This use has been determined to be compatible provided the stipulations necessary to ensure compatibility are implemented, and the use does not exceed thresholds necessary for visitor safety and resource protection. We do not expect this use to materially interfere with or detract from the mission of the National Wildlife Refuge System, nor diminish the purposes for which the refuge was established. It will not pose significant adverse effects on Refuge resources, nor interfere with public use of the Refuge, nor cause an undue administrative burden.

Signature: Refuge Manager *Jared Bealwein 9/1/2010*  
(Signature and Date)

Concurrence: Regional Chief *Anthony D. Leger 09/16/2010*  
(Signature and Date)

Mandatory 10-year re-evaluation date: *09/16/2020*  
(Date)



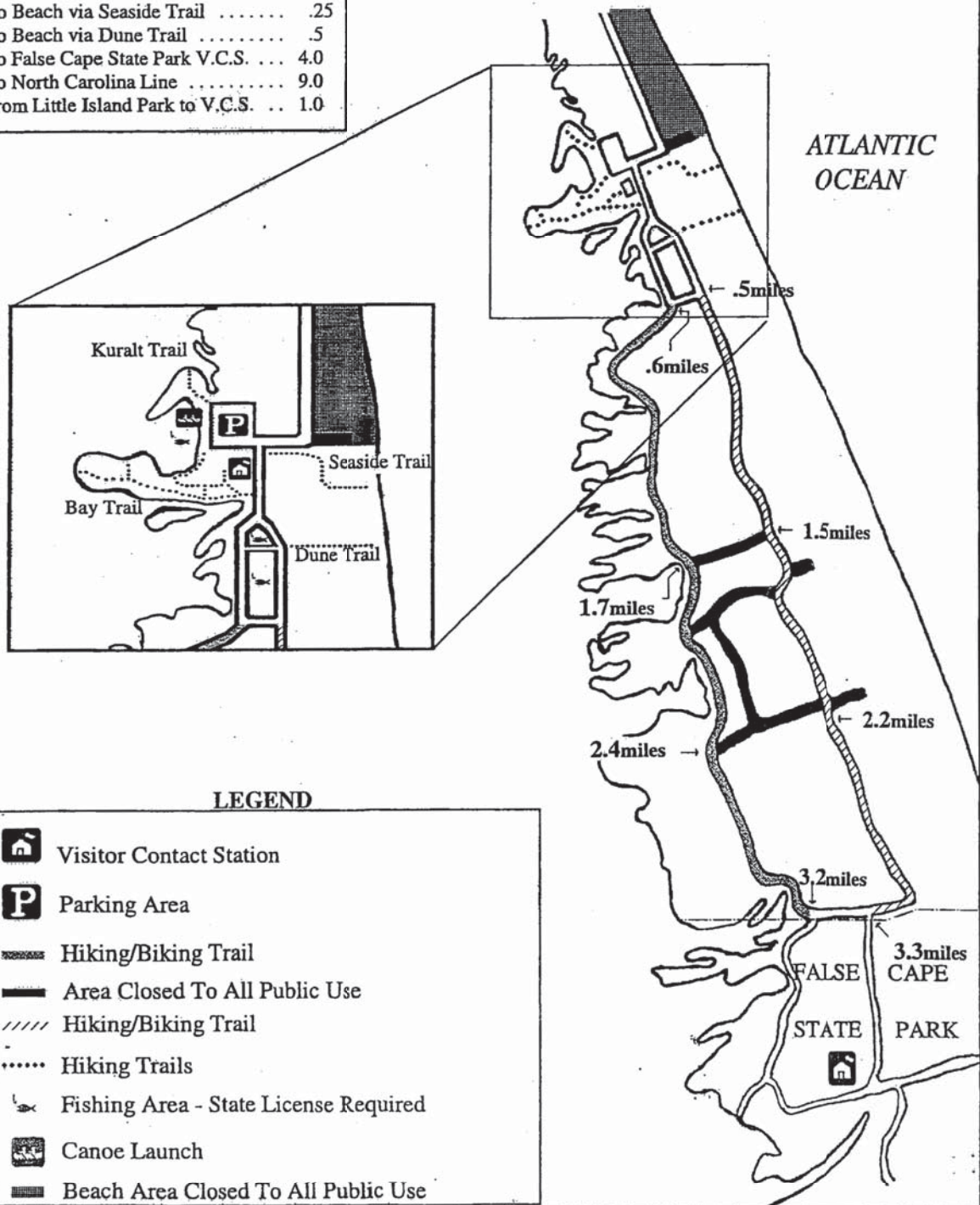
Appendix A: Findings of Appropriateness and Compatibility Determinations

Map A-7

# Back Bay National Wildlife Refuge

## One-way Mileage from V.C.S.

End of Bay Trail .....	.4
To Beach via Seaside Trail .....	.25
To Beach via Dune Trail .....	.5
To False Cape State Park V.C.S. ...	4.0
To North Carolina Line .....	9.0
From Little Island Park to V.C.S. ...	1.0



Back Bay National Wildlife Refuge

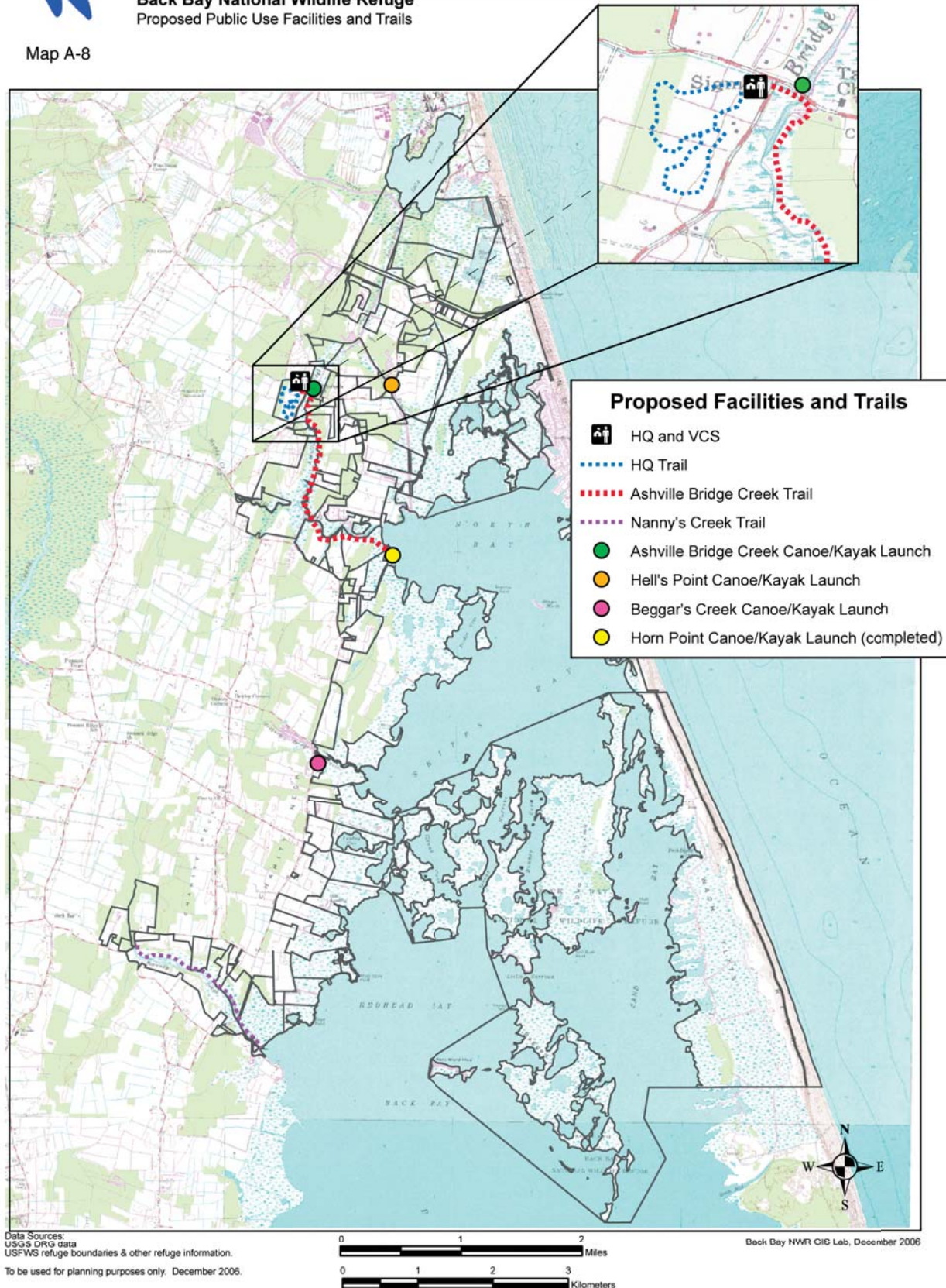
Appendix A: Findings of Appropriateness and Compatibility Determinations



**Back Bay National Wildlife Refuge**  
Proposed Public Use Facilities and Trails

*Draft Comprehensive Conservation Plan*

Map A-8







603 FW 1  
Exhibit 1**FINDING OF APPROPRIATENESS OF A REFUGE USE**Refuge Name: Back Bay NWRUse: Walking/Hiking

This exhibit is not required for wildlife-dependent recreational uses, forms of take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	X	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?	X	
(h) Will this be manageable in the future within existing resources?	X	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	X	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

Where we do not have jurisdiction over the use ("no" to [a]), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to [b], [c], or [d]) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes X No       

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate        Appropriate X

Refuge Manager: *James S. Savelle*

Date: 9/1/2010

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: *Wayne P. Ples*

Date: 9/2/2010

**A compatibility determination is required before the use may be allowed.**

**JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Walking/Hiking

**NARRATIVE**

Walking and hiking are a means to facilitate priority public uses of wildlife observation and photography. Our dike roads and beach are suitable areas for these activities. Also, the 1997 MOU with Virginia Department of Conservation and Recreation states that the refuge allow public access to False Cape State Park, which is five miles south of the Refuge. Vehicles are not allowed through the Refuge, therefore, visitors must walk or hike. These uses do not have negative impacts on the Refuge mission and does not require additional resources to allow.

## **COMPATIBILITY DETERMINATION**

**USE:** Walking/Hiking

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

### **Refuge Purposes**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is this use? Is it a priority public use?**

The uses are walking and hiking. Although walking and hiking are not priority public uses, these pedestrian activities do facilitate priority public uses (primarily wildlife observation and photography) of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997.

#### **(b) Where would the use be conducted?**

Refuge Barrier Spit (Northern/Public Use Zone) (Map A-8): This developed area comprises approximately 280 acres, and serves more than 110,000 visitors annually. For walking and hiking, this area includes a trail system, two boardwalks providing access to four miles of beach, wildlife viewing facility, viewing scopes, one-half mile of dike roads (gravel), and one mile of asphalt entrance road. Future plans include re-alignment of the entrance road with a parallel, multi-purpose trail. In addition, we will expand this zone for public use in order to access the newly constructed wildlife viewing facility located at the northern edge of the “C” Pool impoundment (see next paragraph).

Refuge Barrier Spit (Southern/Impoundment Zone) (Map A-9): Comprising more than 900 acres of restored wetlands, this section of the Refuge currently provides two dike roads that serve as pedestrian trails (7.2 miles) through the Refuge, and provides wildlife viewing and photography opportunity, as well as seasonal public access to False Cape State Park. Visitors must pass through the Refuge Barrier Spit, Northern Zone in order to access this area and/or the State Park. No public vehicle traffic or parking is permitted in this area. This area serves more than 20,000 visitors annually. Public access is allowed to the wildlife viewing facility at the northern edge of “C” Pool (see section “c” below).

Refuge West Side (Map A-9): The Asheville Bridge Creek Environmental Education Center (ABCEEC) provides pedestrian activities via a short self-guided interpretive trail and a wildlife viewing/activity pier. The Frank Carter Impoundments on Colchester Road provide for pedestrian activities (1.4 miles) and has a wildlife viewing platform.

We will construct two multi-purpose trails; one on Tract #244 at the corner of Sandbridge Road and New Bridge Road, and the other to be along the east side of Asheville Bridge Creek to the Horn Point Public Access Site. The former would be in conjunction with the newly proposed headquarters/Visitor Contact Station (HQ/VCS) (see Compatibility Determination titled “Operation of VCS and Public Parking”).

**(c) When would the use be conducted?**

Refuge Barrier Spit (Northern/Public Use Zone): Year-round, one-half hour before sunrise to one-half hour after sunset. A temporary closure to these activities is implemented during any scheduled Refuge hunt dates.

Refuge Barrier Spit (Southern/Impoundment Zone): Open to pedestrian activities seasonally, from April 1 through October 31, from one-half hour before sunrise to a one-half hour after sunset. The Southern Zone oceanfront beach remains open to these activities year-round, except on scheduled public hunt dates.

These impoundments provide undisturbed resting and feeding for migratory waterfowl during the winter months; therefore they are closed to all pedestrian access from November 1 through March 31. Public access is available to the wildlife viewing facility, which lies approximately 500 yards past the public open/close boundary.

Refuge West Side: Year-round from one-half hour before sunrise to one-half hour after sunset, at all locations. Trails on the west side would remain open during hunting seasons, as the trails are not near the designated hunt zones.

**(d) How would the use be conducted?**

Such activities are allowed on established roads and trails that have been designed to accommodate such uses, in areas that are the least sensitive to human intrusion. These uses are conducted for the general public, as well as for organized groups, including schools and scout groups. Groups of 10 or more will be required to have permission to visit the Refuge for these activities, and a seasonal entrance fee from April 1 through October 31 will be charged to all, with the exception of school groups, scouts on merit badge projects assignments, or children under 16 years of age.



**(e) Why is the use being proposed?**

Wildlife observation and photography are two of the six priority public uses on National Wildlife Refuges. If compatible, they are to receive enhanced consideration over other secondary public uses. Pedestrian travel, including walking and hiking, are modes of transportation used to access areas for participating in the two identified priority public uses. Future road and trail development at the newly proposed headquarters/visitor contact station site will be designed to maximize resource protection, while providing safe and convenient access to nearby trails via these transportation modes. Realignment of the entrance road and the multi-use trail planned to parallel the entrance road will accommodate safer passage for visitors.

**AVAILABILITY OF RESOURCES:**

The resources necessary to provide and administer this use, at current use levels, is available within current and anticipated Refuge budgets. Staff time associated with administering this use is related to assessing and conducting trail maintenance, including gates and signs, monitoring potential impacts of the use on Refuge resources and visitors, and providing information to the public about the uses.

The Visitor Services Manager is available for public outreach. A Park Ranger will monitor visitor use and user interactions. The Park Ranger will conduct law enforcement activities to provide for visitor safety and resource protection. Maintenance staff performs the regular maintenance and repairs of Refuge roads and associated structures.

**ANTICIPATED IMPACTS OF THE USE:**

Pedestrian travel has the potential of impacting shorebird, waterfowl, marshbirds and other migratory bird populations feeding and resting near the trails and on beaches during certain times of the year. Use of upland trails is more likely to impact songbirds than other migratory birds. Human disturbance to migratory birds has been documented in many studies in different locations.

*Direct Impacts*

Direct impacts have an immediate affect on wildlife. We expect those impacts to include the presence of humans disturbing wildlife, which typically results in a temporary displacement without long-term effects on wildlife individuals or populations. Some species will avoid the areas people frequent, such as the developed trails and the buildings, while others seem unaffected by or even drawn to the presence of humans. Overall, those effects should not be significant, because most of the Refuge will experience minimal public use.

Conflicts arise when migratory birds and humans are present in the same areas (Boyle and Samson 1985). Response of wildlife to human activities includes: departure from site (Owen 1973, Burger 1981, Korschgen et al 1985, Henson and Grant 1991, Kahl 1991, Klein 1993), use of suboptimal habitat (Erwin 1980, Williams and Forbes 1980), altered behavior (Burger 1981, Korschgen et al. 1985, Morton et al. 1989, Ward and Stehn 1989, Havera et al. 1992, Klein 1993), and increase in energy expenditure (Morton et al. 1989, Belanger and Bedard 1990). McNeil et al. (1992) found that many waterfowl species avoid disturbance by feeding at night instead of during the day. The location of recreational activities impacts species in different ways. Miller et al. (1998) found that nesting success was lower near recreational trails, where human activity was common, than at greater distances from the trails. A number of species have shown greater reactions when

pedestrian use occurred off trail (Miller, 1998). In addition, Burger (1981) found that wading birds were extremely sensitive to disturbance in the northeastern U.S. In regard to waterfowl, Klein (1989) found migratory dabbling ducks to be the most sensitive to disturbance and migrant ducks to be more sensitive when they first arrived, in the late fall, than later in winter. She also found gulls and sandpipers to be apparently insensitive to human disturbance, with Burger (1981) finding the same to be true for various gull species.

For songbirds, Gutzwiller et al. (1997) found that singing behavior of some species was altered by low levels of human intrusion. Pedestrian travel can impact normal behavioral activities, including feeding, reproductive, and social behavior. Studies have shown that ducks and shorebirds are sensitive to pedestrian activity (Burger 1981, 1986). Resident waterbirds tend to be less sensitive to human disturbance than migrants, and migrant ducks are particularly sensitive when they first arrive (Klein 1993). In areas where human activity is common, birds tolerated closer approaches than in areas receiving less activity.

#### *Indirect Impacts*

Laskowski et al. (1993), studied behavior of snowy egrets, female mallards, and greater yellowlegs on Back Bay NWR within 91.4 meters of impoundment dikes used by the general public. Behavior of snowy egrets was recorded during August and September 1992 to represent post-breeding marsh and wading birds. Mallards were monitored during migration (November 1992) and during the winter January (1993). Greater yellowlegs' behavior was observed during the northward shorebird migration (May 1993). Behavior was monitored during the typical public activities of walking, bicycling, and driving a vehicle past the sample sites.

The study found that snowy egret resting behavior decreased and alert behavior increased in the presence of humans. Preening decreased when humans were present, but this change was not significant. Feeding, walk/swim, and flight behaviors were not related to human presence. Female mallards in November increased feeding, preening and alert behaviors in the presence of humans. Resting, walk/swim, and flight behavior were not influenced by human presence. In January, female mallard resting and preening behavior were not influenced by the presence of humans. However, feeding, alert, walk/swim, and flight behaviors were related to human presence. Greater yellowlegs increased alert behavior in the presence of humans. No other behaviors were affected. Maintenance behavior (combined feeding, resting, and preening) decreased when humans were present for all study species. In addition, this decrease was accompanied by an increase in escape behavior by each species. Maintenance behavior of mallards in January decreased in the presence of vehicles and combined disturbance. Escape behavior increased when vehicles were present. Maintenance behavior of greater yellowlegs declined when bicycles and vehicles were present but was not influenced by pedestrian presence.

During a five year study which involved nine different species of birds, researchers found only minimal evidence that intrusion affected bird distributions (Gutzwiller and Anderson 1999). This study also found that the species affected by intrusion were not consistent from year to year or within study areas and could be due to habituation of intrusion (Gutzwiller and Anderson 1999).

People can be vectors for invasive plants by moving seeds or other propagules from one area to another. Once established, invasive plants can out-compete native plants, thereby altering habitats and indirectly impacting wildlife. The threat of invasive plant establishment will always be an issue requiring annual monitoring and treatment when necessary. Our staff will work at eradicating invasive plants and educating the visiting public. Also, opening Refuge lands to public use can often result in littering, vandalism, or other illegal activities on the Refuge.

#### *Cumulative Impacts*

Impacts may be minor when we consider them alone, but may become important when we consider them collectively. Our principal concern is repeated disruptions of nesting, resting, or foraging birds. Our knowledge and observations of the affected areas show no evidence that uses cumulatively will adversely affect the wildlife resource. Although we do not expect substantial cumulative impact from these uses in the near term, it will be important for Refuge staff to monitor those uses and, if necessary, respond to conserve high-quality wildlife resources.

Refuge staff, in collaboration with volunteers, will monitor and evaluate the effects of these uses to discern and respond to any unacceptable impacts on wildlife or habitats. To mitigate those impacts, the Refuge will continue to close areas to the public to protect wildlife during critical life periods.

Future road and trail development at the newly proposed headquarters/visitor contact station site will be accomplished on a previously disturbed agricultural site. Realignment of the entrance road and developing a multi-use trail will all occur in an area that has already been developed primarily to accommodate priority public uses and to deliver utilities to the current headquarters. Therefore, little wildlife value will be lost due to newly proposed construction projects. We expect no additional effects from providing these uses on the Refuge.

#### **PUBLIC REVIEW AND COMMENT:**

As part of the CCP process for Back Bay NWR this compatibility determination was made available for a 30-day public review and comment period with the release of the Draft CCP/EA.

#### **DETERMINATION (CHECK ONE BELOW):**

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

#### **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

No off-road or off-trail access will be permitted, except for emergency or administrative purposes, for the current motor vehicle access permit program for North Carolina residents, and for hunters.

Groups of 10 or more will be required to have permission to visit the Refuge for these activities, and a seasonal entrance fee from April 1 through October 31 will be charged to all, with the exception of school groups, scouts on merit badge projects assignments, or children under 16 years of age.

#### **JUSTIFICATION:**

Walking and hiking have been determined to be compatible provided the stipulations necessary to ensure compatibility are implemented, and the use does not exceed thresholds necessary for visitor safety and resource protection. We do not expect this use to materially interfere with or detract from the mission of the National Wildlife Refuge System, nor diminish the purposes for which the refuge was established. It will not pose significant adverse effects on Refuge resources, nor interfere with public use of the Refuge, nor cause an undue administrative burden.

Visitors participating in these uses, which facilitate wildlife observation and photography, will provide compatible recreational opportunities for visitors to observe wildlife habitats firsthand, and learn about wildlife and wild lands at their own pace in an unstructured environment. Authorization of these uses will result in a greater constituency for achieving Refuge goals, and, ultimately, the Service mission.

Signature: Refuge Manager  9/1/2010  
(Signature and Date)

Concurrence: Regional Chief  09/16/2010  
(Signature and Date)

Mandatory 10-year re-evaluation date: 09/16/2020  
(Date)

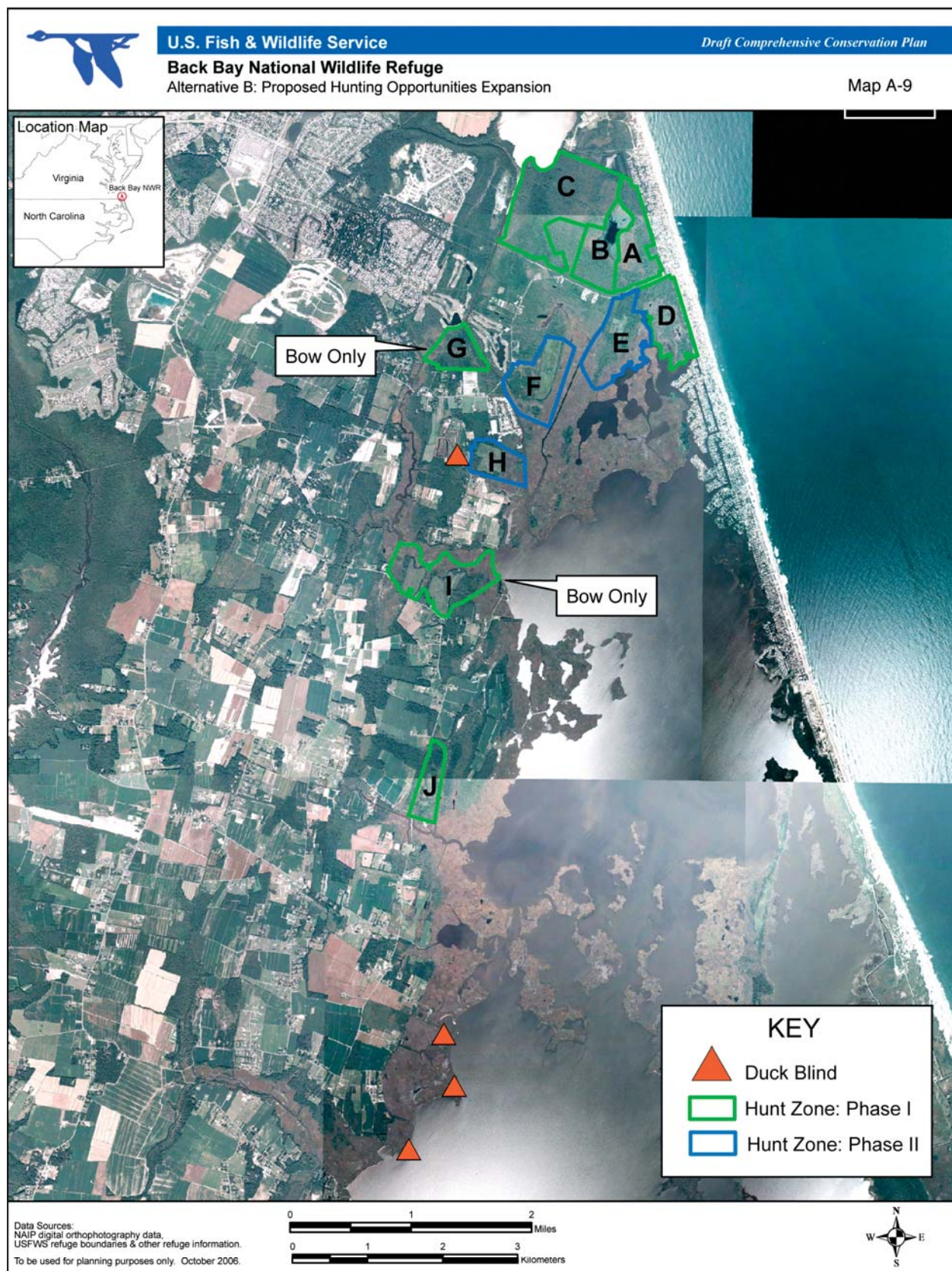


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## Appendix A: Findings of Appropriateness and Compatibility Determinations







**FINDING OF APPROPRIATENESS OF A REFUGE USE**Refuge Name: Back Bay NWRUse: Bicycling

This exhibit is not required for wildlife-dependent recreational uses, forms of take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	X	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?	X	
(h) Will this be manageable in the future within existing resources?	X	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	X	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

Where we do not have jurisdiction over the use ("no" to [a]), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to [b], [c], or [d]) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes \_\_\_\_\_ No X

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate \_\_\_\_\_ Appropriate X

Refuge Manager: [Signature] Date: 9/1/2010

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: [Signature] Date: 9/2/2010

**A compatibility determination is required before the use may be allowed.**

**JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Bicycling

**NARRATIVE**

Like walking and hiking, biking is another means to observe wildlife and take photographs. Our dike roads and beach are suitable areas for biking and observing wildlife. Also, the 1997 MOU with Virginia Department of Conservation and Recreation states that the refuge allow public access to False Cape State Park, which is five miles south of the Refuge. Vehicles are not allowed through the Refuge to the State Park; therefore, visitors must walk, hike or bike. This use does not have negative impacts on the Refuge mission and does not require additional resources to allow.

## **COMPATIBILITY DETERMINATION**

**USE:** Bicycling

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

### **REFUGE PURPOSES**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is the use? Is the use a priority public use?**

The use is bicycling on Back Bay National Wildlife Refuge. Bicycling is not a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57).

#### **(b) Where would the use be conducted?**

Biking is allowed in any public use “zone” of the Refuge. This includes the beach (excluding the North Mile) and trails at the current headquarters/visitor contact station (VCS) on the barrier spit, at canoe/kayak launch facilities and at the proposed new headquarters/VCS and associated trails at Tract #244. This use is not permitted in areas managed for habitat conservation or wildlife protection.

#### **(c) When would the use be conducted?**

This use is allowed whenever the zones identified in “b” above are open for public access. Open periods are from one-half hour before sunrise to one-half hour after sunset as follows:

- ☒ beach and VCS area to the south end of D-Pool (head of east and west dikes) – year round
- ☒ dike trails south of D-Pool – April 1 through October 31
- ☒ canoe/kayak launches – April 1 through October 31
- ☒ proposed new visitor contact station and trails – year round

**(d) How would the use be conducted?**

Bicycling can facilitate priority public uses; most commonly observing the natural landscape and taking photos from a bicycle. Riders stop to observe associated animal and plant communities. The use mainly occurs in groups with an average group size of 2-4 riders. Any group of bicyclists exceeding 10 requires a permit to promote safety with other users.

Travel is limited to designated trails with gravel surfaces and where road width can accommodate the safe passage of other users. Designated trails also have sufficient viewing distance for cyclists to detect the approach of other users and maneuver to accommodate them. Cyclists either enter the Refuge at public entry points or transport bicycles by vehicle and park at designated parking sites.

Cycling is conducted in accordance with the stipulations necessary to ensure compatibility. Safety and information signs will be installed at Refuge entry points and at appropriate sites where designated roads intersect other roads and trails. Brochures and maps depicting the roads open for this use will be available at Refuge headquarters and kiosks.

Roads are maintained in such a manner as is practical to minimize environmental effects such as erosion and sedimentation and to provide safe conditions for travel. Existing potholes that promote off-road detours will be filled with gravel. Roads will be monitored and maintained.

**(e) Why is the use being proposed?**

Although bicycling is not directly a priority public use, it is a means/mechanism to conduct priority public uses, just like walking and hiking. Cycling on the Refuge would provide an increased opportunity for the public to participate in priority public uses. Cycling is less physically demanding than pedestrian access and provides a more expedient mode of travel to view the Refuge's diverse biological assets. At current levels of use and restricted to designated roads with hardened and modified surfaces, cycling causes minimal surface disturbance. Designated roads at the southern end of the Refuge provide good opportunities to view beach, dunes, forested, and marsh communities.

Outfitters, academic institutions and civic organizations (including the Boy Scouts, who conduct environmental education tours on bicycles) have led public biking tours of/through the Refuge. The Refuge anticipates these organizations will continue to request to lead such tours for groups.

**AVAILABILITY OF RESOURCES:**

The resources necessary to provide and administer this use, at current use levels, is available within current and anticipated Refuge budgets. Staff time associated with administering this use is related to assessing and conducting trail maintenance, including kiosks, gates and signs, monitoring potential impacts of the use on Refuge resources and visitors, and providing information to the public about the use.



The Visitor Services Manager is available for public outreach. A Park Ranger will monitor visitor use and user interactions. The Park Ranger will conduct law enforcement activities to provide for visitor safety and resource protection. Maintenance staff performs the regular maintenance and repairs of Refuge roads and associated structures.

### **ANTICIPATED IMPACTS OF THE USE:**

There is some wildlife disturbance associated with bicycling on the Refuge; however, it is believed not to be at an increased rate when compared to pedestrian use. This is the same for trail/road maintenance. Impacts on habitat from bike tires is also negligible. There is also an inherent greater risk to the public from bicycling. On gravel roads riders can fall, causing personal and property damage to themselves or other Refuge users.

Biking on Refuge trails has the potential of impacting shorebird, waterfowl, marshbirds and other migratory bird populations feeding and resting near the trails and on beaches during certain times of the year. Use of upland trails is more likely to impact songbirds than other migratory birds. Human disturbance to migratory birds has been documented in many studies in different locations.

#### *Direct Impacts*

Direct impacts have an immediate affect on wildlife. We expect those impacts to include the presence of humans disturbing wildlife, which typically results in a temporary displacement without long-term effects on wildlife individuals or populations. Some species will avoid the areas people frequent, such as the developed trails and the buildings, while others seem unaffected by or even drawn to the presence of humans. Overall, those effects should not be significant, because most of the Refuge will experience minimal public use.

Conflicts arise when migratory birds and humans are present in the same areas (Boyle and Samson 1985). Response of wildlife to human activities includes: departure from site (Owen 1973, Burger 1981, Korschgen et al 1985, Henson and Grant 1991, Kahl 1991, Klein 1993), use of suboptimal habitat (Erwin 1980, Williams and Forbes 1980), altered behavior (Burger 1981, Korschgen et al. 1985, Morton et al. 1989, Ward and Stehn 1989, Havera et al. 1992, Klein 1993), and increase in energy expenditure (Morton et al. 1989, Belanger and Bedard 1990). McNeil et al. (1992) found that many waterfowl species avoid disturbance by feeding at night instead of during the day. The location of recreational activities impacts species in different ways. Miller et al. (1998) found that nesting success was lower near recreational trails, where human activity was common, than at greater distances from the trails. A number of species have shown greater reactions when pedestrian use occurred off trail (Miller, 1998). In addition, Burger (1981) found that wading birds were extremely sensitive to disturbance in the northeastern U.S. In regard to waterfowl, Klein (1989) found migratory dabbling ducks to be the most sensitive to disturbance and migrant ducks to be more sensitive when they first arrived, in the late fall, than later in winter. She also found gulls and sandpipers to be apparently insensitive to human disturbance, with Burger (1981) finding the same to be true for various gull species.

For songbirds, Gutzwiller et al. (1997) found that singing behavior of some species was altered by low levels of human intrusion. Pedestrian travel can impact normal behavioral activities, including feeding, reproductive, and social behavior. Studies have shown that ducks and shorebirds are sensitive to pedestrian activity (Burger 1981, 1986). Resident waterbirds tend to be less sensitive

to human disturbance than migrants, and migrant ducks are particularly sensitive when they first arrive (Klein 1993). In areas where human activity is common, birds tolerated closer approaches than in areas receiving less activity.

#### *Indirect Impacts*

Laskowski et al. (1993), studied behavior of snowy egrets, female mallards, and greater yellowlegs on Back Bay NWR within 91.4 meters of impoundment dikes used by the general public. Behavior of snowy egrets was recorded during August and September 1992 to represent post-breeding marsh and wading birds. Mallards were monitored during migration (November 1992) and during the winter January (1993). Greater yellowlegs' behavior was observed during the northward shorebird migration (May 1993). Behavior was monitored during the typical public activities of walking, bicycling, and driving a vehicle past the sample sites.

The study found that snowy egret resting behavior decreased and alert behavior increased in the presence of humans. Preening decreased when humans were present, but this change was not significant. Feeding, walk/swim, and flight behaviors were not related to human presence. Female mallards in November increased feeding, preening and alert behaviors in the presence of humans. Resting, walk/swim, and flight behavior were not influenced by human presence. In January, female mallard resting and preening behavior were not influenced by the presence of humans. However, feeding, alert, walk/swim, and flight behaviors were related to human presence. Greater yellowlegs increased alert behavior in the presence of humans. No other behaviors were affected. Maintenance behavior (combined feeding, resting, and preening) decreased when humans were present for all study species. In addition, this decrease was accompanied by an increase in escape behavior by each species. Maintenance behavior of mallards in January decreased in the presence of vehicles and combined disturbance. Escape behavior increased when vehicles were present. Maintenance behavior of greater yellowlegs declined when bicycles and vehicles were present but was not influenced by pedestrian presence.

The presence of bicycles and vehicles increased escape behavior. Snowy egrets and female mallards increased movement between subplots and to areas within the study area but further from the disturbance.

During a five year study which involved nine different species of birds, researchers found only minimal evidence that intrusion affected bird distributions (Gutzwiller and Anderson 1999). This study also found that the species affected by intrusion were not consistent from year to year or within study areas and could be due to habituation of intrusion (Gutzwiller and Anderson 1999).

People can be vectors for invasive plants by moving seeds or other propagules from one area to another. Once established, invasive plants can out-compete native plants, thereby altering habitats and indirectly impacting wildlife. The threat of invasive plant establishment will always be an issue requiring annual monitoring and treatment when necessary. Our staff will work at eradicating invasive plants and educating the visiting public. Also, opening Refuge lands to public use can often result in littering, vandalism, or other illegal activities on the Refuge.

#### *Cumulative Impacts*

Impacts may be minor when we consider them alone, but may become important when we consider them collectively. Our principal concern is repeated disruptions of nesting, resting, or foraging

birds. Our knowledge and observations of the affected areas show no evidence that biking on refuge trails will adversely affect the wildlife resource. Although we do not expect substantial cumulative impact from biking in the near term, it will be important for Refuge staff to monitor, and, if necessary, respond to conserve high-quality wildlife resources.

Refuge staff, in collaboration with volunteers, will monitor and evaluate the effects of biking to discern and respond to any unacceptable impacts on wildlife or habitats. To mitigate those impacts, the Refuge will continue to close areas to the public to protect wildlife during critical life periods.

## **PUBLIC REVIEW AND COMMENT:**

As part of the CCP process for Back Bay NWR this compatibility determination will undergo extensive public review, including a comment period of 30 days following the release of the Draft CCP/EA.

## **DETERMINATION (CHECK ONE BELOW):**

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

## **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

- ☒ Cycling to facilitate priority public uses is only compatible on the roads designated and described above.
- ☒ Access routes will not significantly impact threatened or endangered species.
- ☒ Signs necessary for visitor information, safety, and traffic control will be installed.
- ☒ The Refuge will conduct an outreach program to promote public awareness and compliance with Refuge public use regulations.
- ☒ Camping and overnight parking are prohibited.
- ☒ Cycling is not allowed during the white tail deer/feral hog hunting season (October) for public safety.
- ☒ To promote safety with other users and encourage a nature viewing experience, group size limit exceeding 10 cyclists will require a permit.
- ☒ All routes designated for public access will be annually inspected for maintenance needs. Road and trail conditions that require immediate maintenance will be identified and appropriate action will be taken to correct such conditions. Prompt action will be taken to correct any conditions that risk public safety.
- ☒ Routine law enforcement patrols will be conducted throughout the year. The patrols will promote compliance with Refuge regulations, monitor public use patterns and public safety. Conditions that are or will risk public safety will be identified and appropriate action will be promptly taken to correct such conditions.

**JUSTIFICATION:**

This use has been determined to be compatible provided the stipulations necessary to ensure compatibility are implemented, and the use does not exceed thresholds necessary for visitor safety and resource protection. This activity will not materially interfere with or detract from the mission of the NWRS or purposes for which Back Bay NWR was established. It will not pose significant adverse effects on Refuge resources, will not interfere with public use of the Refuge, nor cause an undue administrative burden. It is a means to conduct priority public uses.

Signature: Refuge Manager

*James J. Sanderson 9/1/2010*  
(Signature and Date)

Concurrence: Regional Chief

*Anthony D. Leger 09/16/2010*  
(Signature and Date)

Mandatory 10-year re-evaluation date:

*09/16/2020*  
(Date)



**LITERATURE CITED:**

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- Ward, D.H., and R.A. Stehn. 1989. Response of Brant and other geese to aircraft disturbance at Izembek Lagoon, Alaska. U.S. Fish and Wildlife Service, Alaska Fish and Wildlife Research Center. Final report to the Minerals Management Service. Anchorage, Alaska. 193 pp.
- Williams, G.J., and E. Forbes. 1980. The habitat and dietary preferences of dark-bellied Brant geese and widgeon in relation to agricultural management. *Wildfowl*. 31:151-157.

**FINDING OF APPROPRIATENESS OF A REFUGE USE**Refuge Name: Back Bay NWRUse: Launching of Non-Trailerred Vessels

This exhibit is not required for wildlife-dependent recreational uses, forms of take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	X	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?	X	
(h) Will this be manageable in the future within existing resources?	X	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	X	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

Where we do not have jurisdiction over the use ("no" to [a]), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to [b], [c], or [d]) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes X No     

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate      Appropriate X

Refuge Manager: *David Brundage* Date: 9/1/2010

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: *David Brundage* Date: 9/2/2010

**A compatibility determination is required before the use may be allowed.**

## **JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Launching of Non-Trailerred Vessels

### **NARRATIVE**

The Refuge does not have the infrastructure to support trailers in our parking areas; however, it is within Refuge operational capacity to permit the launching of vessels that fit on or in a vehicle. Non-trailerred vessels tend to be smaller in size, or non-motorized, which are hand launched (i.e. canoe/kayaks). Like walking, hiking, and biking, canoe/kayaking is another means to observe wildlife and take photographs. Smaller boats, not intended for fast speeds, are utilized to access the Long Island hunt zone and to fish Back Bay. Non-motorized boats do not have a negative impact on water quality of the Refuge. We currently provide car top boat launch facilities at two locations on the Refuge, with three more proposed in the CCP.



## **COMPATIBILITY DETERMINATION**

**USE:** Launching of Non-Trailerred Vessels

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

### **REFUGE PURPOSES**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is this use? Is it a priority public use?**

The use is the launching of non-trailerred vessels. This use is not considered a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997.

#### **(b) Where would the use be conducted?**

Launching is allowed at five locations (Map A-10); the existing canoe/kayak launch at the headquarters/Visitor contact Station, the existing canoe/kayak launch on Horn Point Road, and the proposed canoe/kayak launches on Muddy Creek Road at Beggar’s Creek, on Sandbridge Road at Asheville Bridge Creek and on Sandbridge Road at Hell’s Point Creek.

#### **(c) When would the use be conducted?**

The canoe/kayak launch at the existing headquarters/Visitor contact Station is currently open year-round. The canoe/kayak launch on Horn Point Road is currently open from April 1 through October 31 of each year. The planned canoe/kayak launch at Asheville Bridge Creek will be open

from April 1 through October 31, until the time when the administrative headquarters is moved to that locale. The planned Hell's Point Creek and Beggar's Creek canoe/kayak launches will be open for public use from April 1 through October 31 of each year. Use will be permitted one-half hour before sunrise to one-half hour after sunset. For launches seasonally opened, Special Use Permits can be issued for use during closed seasons.

**(d) How would the use be conducted?**

Visitors to these sites are only allowed to launch boats that fit in or on top of their vehicle. No trailers are permitted due to limited parking. No personal watercrafts (PWCs) are allowed to launch, even if not on a trailer. Canoe/Kayak outfitters, or guides, will be charged a fee and granted a Special Use Permit to utilize a multi-boat trailer.

**(e) Why is this use being proposed?**

This use allows for a mode of travel on water to view the Refuge's diverse biological assets. At current levels of use, canoes and kayaks would cause minimal resource disturbances. This use provides a means to conduct wildlife-dependent recreational activities under the NWRS Improvement Act of 1997 (i.e., fishing, wildlife observation, photography, hunting). Also, as part of the Refuge boundary expansion in the late 1980's, the Refuge agreed to the City of Virginia Beach to increase public access to Back Bay through cooperative access sites.

**AVAILABILITY OF RESOURCES**

Providing/Managing this use, at all locations, is within the available Visitor Services Program staff resources because visitors utilizing this use "come-and-go" just like a visitor walking the trails to observe wildlife. Compliance with site regulations is within the regular duties of the Station Law Enforcement Officer. However, the facilities constructed to provide this use require initial start-up and additional maintenance costs, of which the former would need to be appropriated by Congress.

Anticipated costs are:

- ☒ Materials to develop/enhance the existing and proposed sites
  - ☒ Horn Point Road – \$11,000                      ☒ Asheville Bridge Creek - \$5,000
  - ☒ Hell's Point Creek - \$200,000                      ☒ Beggar's Creek - \$200,000
- ☒ Visitor Services Manager (GS-12) and/or GS-09 Refuge Operations Specialist (coordination with City and contractors) - 24 weeks start-up = **\$38,400**; 4 weeks/yr. after start-up = **\$6,400**
- ☒ Deputy Refuge Manager (GS-13) (review proposals, budgeting) - 8 weeks start-up = **\$15,000**; 2 weeks/yr. after start-up = **\$3,750**
- ☒ Refuge Manager (GS-14) (coordination, etc.) – 4 weeks start-up = **\$8,320**
- ☒ Maintenance Worker (WG-09) (construct and maintain blind; maintain facilities) - 4 weeks start-up = **\$3,800**; 4 weeks/yr. after start-up = **\$3,800**
- ☒ Law Enforcement Officer (GS-09) (enforcement patrols) 6 weeks/yr. = **\$6,300**

**ANTICIPATED IMPACTS OF THE USE**

Any time a public access site is opened, there is potential for increased littering and loitering. This impact is reduced by providing necessary amenities for trash and locked gates to restrict access when closed.

For songbirds, Gutzwiller et al. (1997) found that singing behavior of some species was altered by low levels of human intrusion. Boat launching may minimally impact normal behavioral activities, including feeding, reproductive, and social behavior; however the areas identified for this activity already have a long history of human disturbance and related habitat degradation. Studies have shown that ducks and shorebirds are sensitive to human activity (Burger 1981, 1986). Resident waterbirds tend to be less sensitive to human disturbance than migrants, and migrant ducks are particularly sensitive when they first arrive (Klein 1993). In areas where human activity is common, birds tolerated closer approaches than in areas receiving less activity.

The Horn Point Launch site is closed to boat launching during the peak bird migration season of November through March. In any case, there is a significant seasonal reduction of boat launching activity on the bay during these months due to colder weather conditions and a related substantial drop in boating tourism and recreation on the bay.

Motor boats can erode sensitive marsh shoreline with their wakes, disturb nesting birds and re-suspend bottom sediments, which reduce water quality and SAV production. These impacts are reduced by prohibiting trailerred boats and personal watercrafts that tend to be bigger and faster. Non-motorized boats do not have a negative impact on water quality of the Refuge.

Providing greater boating access to Back Bay at appropriate Refuge locations allows greater opportunity for the public to view and photograph wildlife in a natural setting, and provides expanded environmental education opportunities.

## **PUBLIC REVIEW AND COMMENT**

As part of the CCP process for Back Bay NWR this compatibility determination was made available for a 30-day public review and comment period with the release of the Draft CCP/EA.

### **DETERMINATION (CHECK ONE BELOW):**

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

### **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY**

No trailerred boats and no personal watercrafts will be allowed to launch. Additional funding must be provided to develop two of the proposed launch sites (see Availability of Resources above).

### **JUSTIFICATION**

As part of the Refuge boundary expansion in the late 1980's, the Refuge agreed to the City of Virginia Beach to increase public access to Back Bay through cooperative access sites on lands acquired by the Refuge. The Refuge currently provides car top boat launch facilities at two locations on the Refuge. Like walking, hiking, and biking, canoe/kayaking is another means to observe wildlife and take photographs. Smaller boats, not intended for fast speeds, are utilized to access the Long Island hunt zone and to fish Back Bay. Non-motorized boats do not have a negative impact on water quality of the Refuge.

This use has been determined to be compatible provided the stipulations necessary to ensure compatibility are implemented, and the use does not exceed thresholds necessary for visitor safety and resource protection. This activity will not materially interfere with or detract from the mission of the NWRS or purposes for which Back Bay NWR was established. It will not pose significant adverse effects on Refuge resources, will not interfere with public use of the Refuge, nor cause an undue administrative burden. It is a means to conduct priority public uses.

Signature: Refuge Manager *James Sandman* 9/1/2010  
(Signature and Date)

Concurrence: Regional Chief *Anthony D. Legier* 09/16/2010  
(Signature and Date)

Mandatory 10-year re-evaluation date: 09/16/2020  
(Date)



**LITERATURE CITED:**

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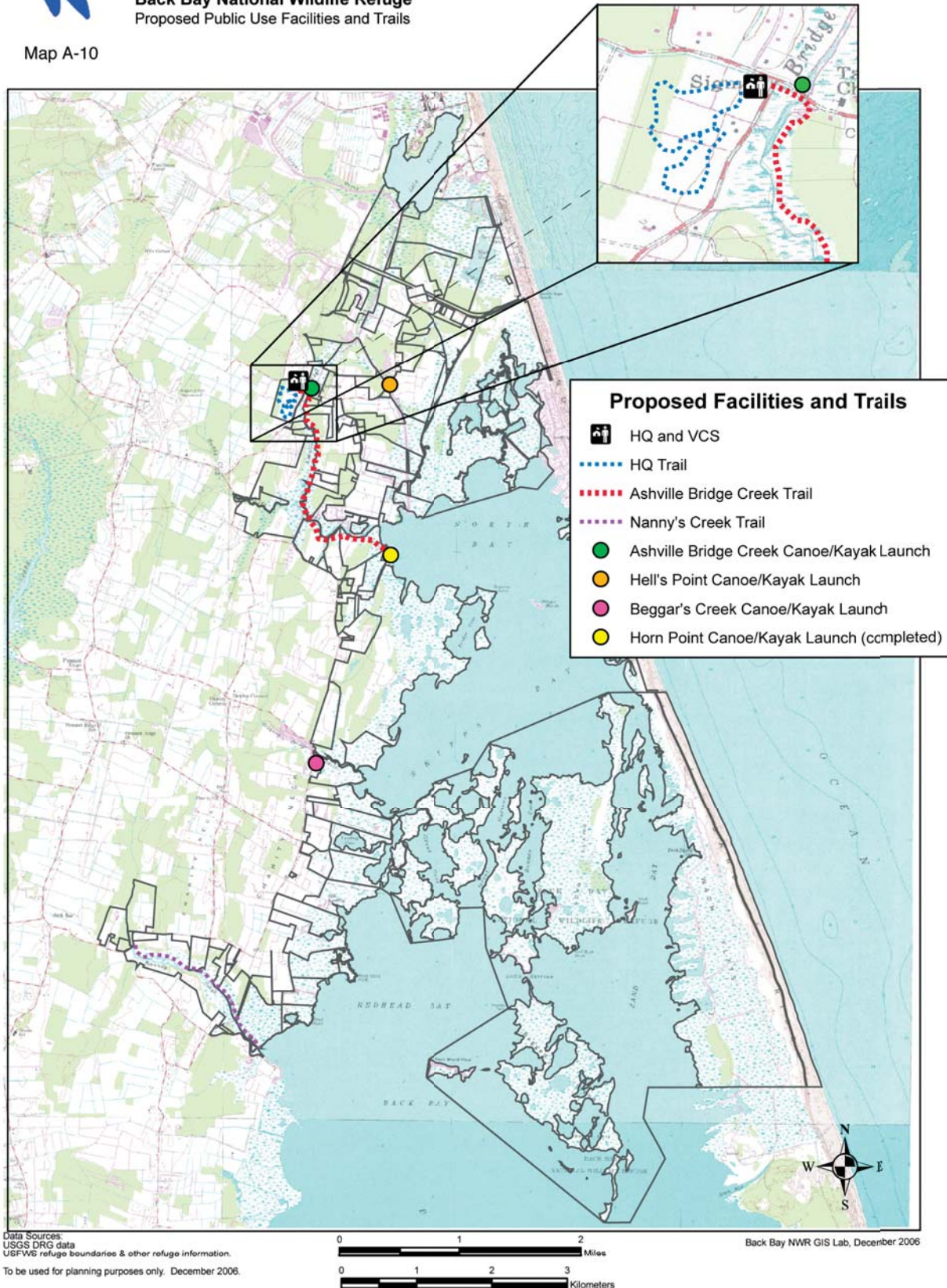
Compatibility Determination– Launching of Non-Trailerred Vessels



**Back Bay National Wildlife Refuge**  
Proposed Public Use Facilities and Trails

*Draft Comprehensive Conservation Plan*

Map A-10



Draft Comprehensive Conservation Plan & Environmental Assessment

**FINDING OF APPROPRIATENESS OF A REFUGE USE**Refuge Name: Back Bay NWRUse: False Cape State Park Access (Through Refuge)

This exhibit is not required for wildlife-dependent recreational uses, forms of take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	X	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?	X	
(h) Will this be manageable in the future within existing resources?	X	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	X	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

Where we do not have jurisdiction over the use ("no" to [a]), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to [b], [c], or [d]) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes        No X

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate        Appropriate X

Refuge Manager: *James J. Bandwein*

Date: 9/1/2010

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: *Daryl A. Rios*

Date: 9/2/2010

**A compatibility determination is required before the use may be allowed.**

**JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** False Cape State Park Access (Through Refuge)

**NARRATIVE**

False Cape State Park is located to the south of Back Bay NWR, with its only access from Virginia Beach being through the Refuge. In 1996, the Service and Virginia Department of Conservation and Recreation signed a Memorandum of Understanding (MOU), which describes stipulations for providing both public access and access for official business to False Cape State Park. This “Access Agreement” includes stipulations for operating a public transit system, and where and when access is granted through the Refuge. To uphold our commitment to the MOU, which facilitates a cooperative partnership with False Cape State Park, we allow this use.



## **COMPATIBILITY DETERMINATION**

**USE:** False Cape State Park Access (Through Refuge)

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

### **REFUGE PURPOSES**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is this use? Is it a priority public use?**

The use is providing public access and access to Park employees to False Cape State Park. This is not a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997.

#### **(b) Where would the use be conducted?**

Public access, and access for official business, to False Cape State Park is allowed on the east and west dike roads, and the beach.

#### **(c) When would the use be conducted?**

Access via one of the two dikes is available twelve months a year during refuge hours. Decisions as to which dike will be opened or closed is based upon wildlife surveys and seasonal management practices. The opening and closing of a dike access route is closely coordinated with the park and generally covers weekly or monthly periods. State park employees are not restricted by 50 CFR 26.34.

**(d) How would the use be conducted?**

The use is conducted according to the 1996 Memorandum of Understanding (MOU) signed by the Regional Director of the Service and the Governor of Virginia (Attachment A.2). In order to minimize wildlife disturbances, administrative and public access is provided with stipulations on how many trips and where trips can occur through the Refuge. In summary, these stipulations are as follows:

**Table A.1. Number of Vehicle Trips<sup>1</sup> Per Day**

Month	East Dike Admin. Access	West Dike Admin. Access	Beach Admin. Access	Public Dike Access	Public Beach Access
January	Closed	8	32	Closed	Open
February	Closed	8	30	Closed	Open
March	Closed	16	24	Closed	Open
April	Closed	38	Minimized <sup>2</sup>	West Open	Open
May	Closed	38	Minimized	West Open	Open
June	40	Closed	Minimized	East Open	Open
July	44	Closed	Minimized	East Open	Open
August	38	Closed	Minimized	East Open	Open
September	40	Closed	Minimized	East Open	Open
October	40	Closed	Minimized	East Open	Open
November	10	Closed	34	Closed	Open
December	Closed	8	34	Closed	Open

<sup>1</sup> Trips is used to describe a single event when vehicular travel via an access route has the potential to disturb wildlife. No public vehicles are allowed through the Refuge.

<sup>2</sup> The goal is to minimize motor vehicle disturbance; however, other Motor Vehicle Access Permit

Program permits make it difficult to completely close the beach to disturbance as they maintain limited access during these months. It is preferred to access the Park via a dike access route for these months.

Public access coincides with the closure of our dike roads in the winter. During this time, the public can access False Cape State Park via the beach. April through October, the public can also access the Park via Refuge dike roads. The MOU also specifies operation of a public tram (i.e. transit) to the Park, which runs April through October. These trips are included in the total number of trips per day.

**(e) Why is this use being proposed?**

False Cape State Park is located to the south of Back Bay NWR with its only access from Virginia Beach being through the Refuge. To administer park operations, it is necessary for Park staff to travel through the Refuge to/from work. Several Park staff live on property, and therefore traverse the Refuge to manage their households. In 1996, the Service and Virginia Department of Conservation and Recreation signed a Memorandum of Understanding (MOU), which describes stipulations for both administrative and public access to False Cape State Park. Public access through the Refuge does provide wildlife-dependent recreational opportunities for Park visitors. For information regarding public compatibility, see the determination titled, Wildlife Observation, Photography, Environmental Education, and Interpretation.

**AVAILABILITY OF RESOURCES**

Additional vehicular traffic degrades our dike roads faster with this use; however, the Park assists with road maintenance. Additional cost for stone and labor to maintain our dike roads is as follows:

- ☒ Maintenance Worker (WG-09) (road and loader maintenance) - 2 week/yr. = **\$1900**

**ANTICIPATED IMPACTS OF THE USE**

Allowing access to False Cape State Park does incur wildlife disturbances; however, the 1996 MOU was developed and agreed upon to greatly minimize negative impacts to wildlife. Impacts include flushing migratory birds off resting and feeding areas, which reduces their energy reserves during migration. This disturbance is slightly greater with vehicular access than pedestrian access; however, access routes are established to reduce impacts. Additional vehicular traffic also degrades our dike roads faster with this use; however, the Park assists with road maintenance.

**PUBLIC REVIEW AND COMMENT**

As part of the CCP process for Back Bay NWR this compatibility determination was made available for a 30-day public review and comment period with the release of the Draft CCP/EA.

**DETERMINATION (CHECK ONE BELOW):**

\_\_\_\_\_ Use is Not Compatible

  X   Use is Compatible With the Following Stipulations

**STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY**

False Cape State Park staff must adhere to the 1996 MOU regarding the number and location of vehicle trips. Park staff shall notify the Refuge Manager requesting any modifications.

## JUSTIFICATION

False Cape State Park is located to the south of Back Bay NWR, with its only access from Virginia Beach being through the Refuge. In 1996, the Service and Virginia Department of Conservation and Recreation signed an MOU, which describes stipulations for providing both public and administrative access to False Cape State Park. To uphold our commitment to the MOU, we continue to allow this use. In addition, this activity will not materially interfere with or detract from the mission of the NWRS or purposes for which Back Bay NWR was established.

This use has been determined to be compatible provided the stipulations necessary to ensure compatibility are implemented, and the use does not exceed thresholds necessary for visitor safety and resource protection. This activity will not materially interfere with or detract from the mission of the NWRS or purposes for which Back Bay NWR was established. It will not pose significant adverse effects on Refuge resources, will not interfere with public use of the Refuge, nor cause an undue administrative burden.

Signature: Refuge Manager *James Sandwein 9/1/2010*  
(Signature and Date)

Concurrence: Regional Chief *Anthony D. Leger 09/16/2010*  
(Signature and Date)

Mandatory 10-year re-evaluation date: *09/16/2020*  
(Date)



## ATTACHMENT A.2 1996 MEMORANDUM OF UNDERSTANDING (MOU)



MEMORANDUM OF UNDERSTANDING  
BETWEEN THE  
U.S. DEPARTMENT OF THE INTERIOR,  
FISH AND WILDLIFE SERVICE  
AND THE  
COMMONWEALTH OF VIRGINIA  
REGARDING ACCESS THROUGH THE  
BACK BAY NATIONAL WILDLIFE REFUGE TO THE  
FALSE CAPE STATE PARK

NOVEMBER 7, 1996

Compatibility Determination– False Cape State Park Access (through Refuge)

MEMORANDUM OF UNDERSTANDING  
BETWEEN THE  
U.S. FISH AND WILDLIFE SERVICE  
AND THE  
COMMONWEALTH OF VIRGINIA

This Memorandum of Understanding (MOU) is made and entered into by the United States Department of the Interior, Fish and Wildlife Service (Service), represented by the Regional Director, Region 5, and the Commonwealth of Virginia, acting through its Department of Conservation and Recreation (DCR), represented by its Director.

I. INTRODUCTION

A. History

The Back Bay National Wildlife Refuge (Refuge) and the False Cape State Park (Park) are co-located on a narrow stretch of barrier spit in the southeastern corner of Virginia. The Park is located south of the Refuge and is not served by public roads. Access to the Park traditionally included foot, bicycle, and limited motor vehicle travel over the Refuge dike system and along the beach. Access to the Park through the Refuge has been an issue since the creation of the Park, as no formal right-of-way was established. Limited vehicular access was provided through annual Refuge special use permits.

In 1993, the Refuge was required, as a result of a nationwide lawsuit, to conduct compatibility determinations on all secondary uses of the Refuge. One such determination found that travel over the dikes by people on foot, on bicycles, and in vehicles disturbed migratory birds at critical times and, therefore, the use was seasonally incompatible. Access was restricted by the Service during those periods.

In March 1995, Congress, through the Senate Committee on Environment and Public Works, encouraged the Service and the Commonwealth to settle this ongoing dispute. The Committee "strongly urges the Fish and Wildlife Service and the State to negotiate a new, multi-year agreement that is consistent with the authorized purposes of the Back Bay National Wildlife Refuge and that provides adequate access to False Cape State Park."

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## Appendix A: Findings of Appropriateness and Compatibility Determinations

**B. Purpose**

This MOU is based on the understanding that the co-existence of these two adjacent properties creates cumulative benefits for wildlife and the public that are far greater than could be achieved separately. The agreement is designed to allow public access to the Park through the Refuge, while minimizing disturbance to wildlife. The MOU also facilitates the cooperative management of this unique ecosystem for the benefit of the citizens of Virginia and the United States.

The conditions in this MOU are based on the management and development parameters for both the Park and Refuge as outlined in their respective long range plans. The MOU shall remain in place so long as these management parameters do not change or until it is terminated as per the conditions outlined in Section III.D of this document. Special use permits will be reissued by the Service to the Park every five years under the conditions of this MOU. Through the MOU, the Service and DCR seek:

1. To provide a safe and rewarding experience for the public.
2. To ensure that migratory bird populations and other wildlife and natural heritage resources of the Back Bay ecosystem are afforded protection critical to their health and survival.
3. To provide efficient and effective management operations at both the Park and the Refuge.
4. To promote and encourage high quality environmental education and other natural resource programs at the Park and the Refuge.

**C. Responsibilities/Authorities**

1. The mission of the Service is to conserve, protect, and enhance fish and wildlife and their habitats for the continuing benefit of the American people. The purposes for which the Refuge was established are:
  - a. As a refuge and breeding ground for migratory birds and other wildlife.
  - b. For the use as an inviolate sanctuary, or for any other management purpose, for migratory birds.
  - c. For the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions.



Compatibility Determination– False Cape State Park Access (through Refuge)

2. The mission of DCR is to conserve, enhance, and advocate wise use of the Commonwealth's unique natural, recreational, historic, scenic, and cultural resources. The purposes for which the Park was established are to:

- a. Provide low impact, day-use and overnight recreation opportunities.
- b. Provide environmental education and research opportunities on a unique barrier ecosystem.
- c. Conserve significant natural heritage communities and resources; protect and interpret the Park's natural, cultural, and historical resources.

3. This MOU is made and entered into pursuant to the provisions of the following statutes:

- a. Fish and Wildlife Coordination Act, 16 U.S.C. 661.
- b. Fish and Wildlife Act, 16 U.S.C. 742.
- c. National Wildlife Refuge System Administration Act, 16 U.S.C.
- d. Refuge Recreation Act, 16 U.S.C. 460.
- e. Virginia's Powers of the Department §10.1-104(A) (2) of the Code of Virginia (1950).
- f. Virginia's Conveyance or Lease of Lands and other Properties §10.1-109 of the Code of Virginia (1950).

4. Nothing in this agreement abrogates the statutory requirements and responsibilities of either agency.

## II. AGREEMENT

A. The Commonwealth and the Service agree that:

1. Public use of the Refuge impoundment/dike system can cause disturbance to migratory birds. Management of the impoundments for migratory birds must be both flexible and dynamic to provide high quality habitat for shore and wading birds and waterfowl. Disturbance to migratory birds will be minimized/avoided through the use of alternate access routes into the Park over the Refuge dikes and beach and via consolidation of trips through the Refuge. Access scheduling will consider seasonal wildlife usage, management practices, and weather-related events.



Appendix A: Findings of Appropriateness and Compatibility Determinations

2. The level of access through the Refuge to the Park authorized by this MOU will be implemented through the issuance of multi-year permits at five year intervals. Access to the Park will be permitted along designated dike routes and/or the beach. Selection of a designated access route will be based upon weekly wildlife surveys and seasonal management practices. By alternating routes, limited access along at least one of the dikes will be available at all times. The selection of the dike access route will be closely coordinated with the Park, clearly marked for visitors, and generally cover weekly or monthly periods.

3. A visitor transportation system or "tram" will be incorporated into Park and Refuge management to reduce the number of disturbances and the duration of each disturbance. As demand for access increases, it will become necessary to rely on a visitor transportation system, both to limit disturbance to wildlife and to promote a higher quality experience for all visitors. The conveyance should use environmentally-sensitive alternative fuels, as technologically feasible. The Commonwealth and the Service will jointly schedule the use of the visitor transportation system.

4. The Commonwealth will enhance management capabilities at the Barbours Hill impoundment area and will turn primary management authority for this area over to the Service. The Service will manage this area in consultation with the Virginia Department of Game and Inland Fisheries. The enhanced management capability of the Barbours Hill area will improve 217 acres of migratory bird habitat. This additional acreage will further offset the functional loss of habitat on the Refuge caused by the access to the Park. Hunting activities and wildlife observation may be permitted on the Barbours Hill impoundment area to the extent that they are compatible with migratory bird management.

5. A long-term objective of the DCR and the Service is to protect the natural beach ecosystem of both properties during critical periods of the year. This MOU initiates a process to limit access along the Refuge beach during the seasons when shorebirds, wading birds, and sea turtles utilize this area.

6. An additional objective of both agencies is to provide coordinated, quality environmental education experiences for Park and Refuge visitors.

7. Expenses associated with maintaining the tram and travel corridor dikes shall be shared by the Service and the DCR.

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## Compatibility Determination– False Cape State Park Access (through Refuge)

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TEL: 5-491-5131

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The "tram operating plan" (see Section II.D.2) will be developed before the tram is put into Service. This plan will identify the usage, logistics, and maintenance requirements for the tram. Each agency's maintenance obligations will be described in a Cooperative Agreement that will address both dike and tram maintenance cost sharing.

8. Vehicle access through the Refuge to the Park will be permitted through Special Use Permits based upon the following guidelines. Attachment 1 provides a more detailed description of the desired number of trips per day at full Park development to meet the reasonable needs for the management of the Park. The Special Use Permit will reflect numbers allowed at maximum development, but the actual number of vehicle trips per day will incrementally increase to these numbers until the Park attains its full development plan. Non-vehicular public access through the Refuge to the Park will also be permitted at the levels identified in Attachment 1 along these same routes.

NUMBER OF VEHICLE TRIPS<sup>1</sup> PER DAY

MONTH	EAST DIKE	WEST DIKE	BEACH
January	closed <sup>2</sup>	4	32
February	closed	4	30
March	closed	16	24
April	closed	38	minimized <sup>3</sup>
May	closed	38	minimized
June	40	closed	minimized
July	44	closed	minimized
August	38	closed	minimized
September	40	closed	minimized
October	40	closed	minimized
November	6	closed	34
December	closed	4	34

<sup>1</sup> "Trips" is used to describe a single event when vehicular travel via an access route has the potential to disturb wildlife. A disturbance may be multiple vehicles, as long as they are traveling together (i.e., not intermittent).

<sup>2</sup> Access via one of the two dike routes will be available 12 months a year. Decisions as to which dike will be open or closed will be based upon wildlife surveys and seasonal management practices. The opening and closing of a dike access route will be closely coordinated with the Park and will generally cover weekly or monthly periods.

<sup>3</sup> Disturbance to wildlife along the beach access route is a concern during certain months of the year. Other permits make it



Appendix A: Findings of Appropriateness and Compatibility Determinations

difficult to close the beach to disturbance at this time. It is the long term goal of the Service to minimize disturbance along the beach resulting from through-traffic. It is hoped this can be done by transporting visitors to the Park via a dike access route for these months.

B. The Service agrees:

1. To support the mission and purposes of the Park to the extent allowable by the purposes of the Refuge.
2. To permit limited access to the Park through the Refuge for employees, visitors, Park cooperators, and Park contractors at the levels indicated in Section II.A.8 above. Access conditions will be described in a Special Use Permit (Attachment 3) issued every five years based on the continuing conditions of this MOU. The access will be permitted 365 days a year, with interior dike access available daily. Access will be managed and controlled with alternate route selection dependent on seasonal wildlife usage, management practices, and weather related events. In cases of severe weather or any other emergency, the health and well being of people (e.g., visitors, permittees, resident staff and their families) will take priority. Access restrictions will be suspended for the duration of the emergency.
3. To manage any and all habitat acreage for which primary management responsibility is transferred to the Service by the Commonwealth.
4. To provide technical assistance on the dike rehabilitation project at Barbours Hill.

C. The Commonwealth agrees:

1. To support the mission and purposes of the Refuge to the extent allowable by the purposes of the Park.
2. To coordinate access for Park business based on the levels indicated in Section II.A.8 above and ongoing communications about special conditions.
3. To approve and adopt the Development Plan for the False Cape State Park (Attachment 2) as the parameters within which the Park will be operated and developed.
4. To designate all areas of the Park as a Natural Area Preserve (Attachment 4), other than those areas already

Compatibility Determination– False Cape State Park Access (through Refuge)

developed, those designated for development in the Development Plan for False Cape State Park (Attachment 2), and those restricted for inclusion by law.

5. To convey primary management responsibility of the Barbours Hill waterfowl management area to the Service, to be managed in consultation with the Virginia Department of Game and Inland Fisheries (Attachment 5). Barbours Hill will be improved to provide for timely management of this acreage commensurate with the existing impoundment management plan on the Refuge. The minimum required to accomplish this is:

a. Raise the dike along the west boundary to a height that will allow for the complete flooding of the acreage considered as part of the transferred area.

b. Construct a clay core, or other structurally sound seepage barrier, in the dike to ensure adequate holding capacity.

c. Widen and slope the dike to safely accommodate a "people mover" and other vehicular traffic and to facilitate safe maintenance and structural integrity.

d. Replace two water control structures with the size necessary to control water levels and of a type existent on the Refuge.

e. Implement an invasive species control program within the impoundments and surrounding dikes for a maximum of five years or until invasive species have been brought under control and high concentration areas have been eliminated.

f. Share the maintenance expenses of the improved dike, as identified in Section II.A.7.

D. To carry out the purposes of this MOU, the Service and the Commonwealth further agree:

1. To seek out available sources of funding (including private sector participation and voluntary contributions) to secure an alternative fuel conveyance for a visitor transportation system.

2. To develop and execute a "tram operating plan" that will include maintenance and operation, fee collection, and cost sharing.

3. To manage the Refuge and the Park according to the



Appendix A: Findings of Appropriateness and Compatibility Determinations

respective management plans.

4. To develop and execute a Back Bay/False Cape Cooperative Management Plan with the objective of enhancing the quality of a visit for our constituents (environmental education, law enforcement, etc.).

5. To have on-site managers meet annually to discuss the management implications of this MOU and to prepare an action plan for the following year.

6. To continue and coordinate hunt programs for recreational and wildlife management purposes.

### III. IMPLEMENTATION

#### A. Points of Contact:

Refuge Manager  
Back Bay National Wildlife  
Refuge  
4005 Sandpiper Road  
Virginia Beach, VA 23453

Park Manager  
False Cape State Park  
4001 Sandpiper Road  
Virginia Beach, VA 23453

(757) 721-2412

(757) 426-7128

#### B. Projects and Work Orders

Projects, work orders, contracts, and other activities that require a transfer of funds between the two agencies will be prepared as cooperative agreements. These agreements will specify the duration, nature, and form of any deliverables. They will not include any recovery of indirect (overhead) costs and may be executed between any elements of the two agencies that are authorized to obligate funds. Reimbursable agreements for project-level activities will not be attached to this agreement.

#### C. Amendments and Annexes

This agreement can be amended by mutual consent of both parties. Significant changes will be distributed for public review for 30 days prior to implementation, or other time frames that may be required pursuant to the National Environmental Policy Act. Amendments will be added as Attachments.

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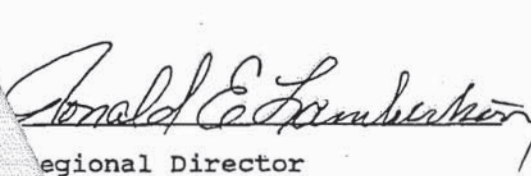
Compatibility Determination– False Cape State Park Access (through Refuge)

List of Annexes:

- Attachment 1 - Table of Proposed Maximum Access Through Back Bay National Wildlife Refuge to False Cape State Park
- Attachment 2 - False Cape State Park Development Plan
- Attachment 3 - Special Use Permit
- Attachment 4 - False Cape State Park Natural Area Preserve Designation Description and Map
- Attachment 5 - Barbours Hill Plat and Description

D. Termination

This MOU shall be effective upon execution and shall be implemented through the concurrent issuance of renewable, five-year Special Use Permits (SUP). Either party may terminate the MOU after a 90 day notice for reasons of: [1] abandonment of the project; [2] failure to utilize lands for the intended/stated purposes; [3] any other material breach of the conditions of this MOU (particularly those conditions agreed to in parts II.A, II.B, II.C, and II.D) and its affiliated SUP, unless cured within said period; [4] any change in applicable Federal or State law materially affecting the activities authorized hereunder. Should new information, needs, or disagreements arise, every effort will be made to renegotiate and amend the agreement before resorting to termination.

  
Regional Director

U.S. Fish and  
Wildlife Service

11-7-96

  
Governor

Commonwealth of Virginia

November 7, 1996  
Date

603 FW 1  
Exhibit 1**FINDING OF APPROPRIATENESS OF A REFUGE USE**Refuge Name: Back Bay NWRUse: Biological Research

This exhibit is not required for wildlife-dependent recreational uses, forms of take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	X	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?	X	
(h) Will this be manageable in the future within existing resources?	X	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	X	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

Where we do not have jurisdiction over the use ("no" to [a]), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to [b], [c], or [d]) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes X No     

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate      Appropriate X

Refuge Manager: *Sarah S. Sullivan* Date: 9/1/2010

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: *David A. Rios* Date: 9/2/2010

**A compatibility determination is required before the use may be allowed.**

**JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Biological Research

**NARRATIVE**

Back Bay NWR does not have the resources to conduct all the necessary biological surveys and studies to manage all resources to carrying capacity. Therefore, we encourage research by outside entities to assist us in collecting and providing biological data for our use. All research proposals are evaluated for their benefits to the Refuge mission and issued a Special Use Permit if found beneficial. All research projects require the principal investigator to provide summary reports of findings and acknowledge the Refuge for their participation.



## **COMPATIBILITY DETERMINATION**

**USE:** Biological Research

**REFUGE NAME:** Back Bay National Wildlife Refuge

**ESTABLISHING AND ACQUISITION AUTHORITY(IES):** The Refuge was established by Executive Order No. 7907 on June 6, 1938 and land is acquired under the Migratory Bird Conservation Act (16 U.S.C. 715-715d, 715e, 715f-715r) of February 18, 1929, (45 Stat. 1222), as amended, and the Emergency Wetlands Resources Act of 1986 (Public Law 99-645; 100 Stat. 3582), as amended.

### **PURPOSES FOR WHICH THE REFUGE WAS ESTABLISHED:**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is the use? Is it a priority public use?**

The use is research conducted by non-Service personnel on the Back Bay National Wildlife Refuge (Back Bay NWR/the Refuge). It is not a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997.

#### **(b) Where would the use be conducted?**

The locations of the research will vary, depending on the research project being conducted. The entire Refuge is open and available for scientific research. A research project is usually limited to a particular habitat type, plant or wildlife species. On occasion, research projects will encompass an assemblage of habitat types, plants or wildlife. The locations are limited to those areas of the refuge that are absolutely necessary for conducting the research and that do not create a significant negative impact to Refuge operations and wildlife use.

**(c) When would the use be conducted?**

The timing of the research depends entirely on the research project needs. We allow scientific research on the Refuge throughout the year, as long as that use does not present a significant negative impact to wildlife use and Refuge management operations. Some projects could be short-term in design, requiring one or several visits over the course of a few days or weeks. Others could be multiple year studies that require more frequent visits to the location. The timing of each use is limited to the minimum required for completion – the Special Use Permit will state the expected time/duration of the research project. If a research project occurs during a Refuge hunting program, special precautions will be required and enforced to ensure public health and safety.

**(d) How would the use be conducted?**

The mechanics of the research work will depend entirely on the individual research project. We will carefully scrutinize the objectives, methods, and approach of each research project before allowing it to occur on the Refuge. We do not permit a research project that lacks an approved study plan and protocol, compromises public health and safety or presents a significant negative impact to Refuge wildlife resources. This permitted research use must be regulated and governed by the conditions and other terms of a Refuge Special Use Permit (SUP). The SUP will provide any needed protection to Refuge policies, mission, wildlife populations, and natural habitats. In addition, all research projects require the primary investigator to submit written summary reports of all findings, and acknowledge the Refuge's participation.

**(e) Why is this use being proposed?**

Research by non-Service personnel is conducted by colleges, universities, federal, state, and local agencies, non-governmental organizations, and qualified members of the public. Such studies further our understanding of the natural environment that we are responsible for managing. Research is therefore an important part of the adaptive management process that often results in improved management of Refuge habitats and wildlife populations. Much of the information that research generates can be applied to management practices both on and adjacent to the Refuge. Past and ongoing Refuge research projects have studied: public use impacts to migratory waterfowl use in the impoundment complex; plant species composition and communities; feral pig population dynamics; resident Canada goose genetics and population distribution; Anuran population composition; migrating songbird population distribution; sand dune movements; rare plant presences and distribution; nutritional value of waterfowl and shorebird foods in coastal impoundments; impoundment management techniques; water quality monitoring; submerged aquatic vegetation abundance and distribution; Avian Influenza migratory bird monitoring; and Cottonmouth snake biology. Many of these are, or have been, multi-year studies.

The Service encourages and supports research and management studies on refuge lands that will improve and strengthen decisions for managing natural resources. The Refuge Manager encourages and seeks research that clearly relates to approved refuge objectives, improves habitat management, and promotes adaptive management. Priority research addresses information on better managing the Nation's biological resources that generally are important to agencies of the Department of Interior, the National Wildlife Refuge System, and State Fish and Game Agencies, and that address important management issues, or demonstrate techniques for managing species or habitats.

Back Bay NWR also considers research for other purposes that may not relate directly to Refuge-

specific objectives, but contribute to the broader enhancement, protection, use, preservation or management of native populations of fish, wildlife and plants, and their natural diversity in the Northeast Region and/or the Atlantic Flyway. All proposals must comply with Service policy on compatibility.

Refuge support for research that relates directly to Refuge objectives may take the form of funding, in-kind services (i.e. housing, use of other Refuge facilities, vehicles, boats, or equipment), and the direct assistance of Refuge staff in collecting field data, providing historical records, conducting management treatments, and/or providing other assistance as appropriate.

#### **AVAILABILITY OF RESOURCES:**

Back Bay NWR incurs the bulk of the cost for research in staff time to review research proposals, coordinate with researchers, and write special use permits (SUP). In some cases, a research project may require only one day of staff time to write a SUP. In other cases, a research project may take many weeks, because the Refuge staff must coordinate with students and advisors and accompany researchers on site visits.

The estimated average annual costs associated with such administration and implementation of outside research proposals on Back Bay NWR are:

- ☒ Senior Refuge Biologist (GS-12) and/or GS-09 Refuge Biologist (review proposals, coordinate with researchers, assist with implementation, special use permits, etc.) - 3 weeks/yr. = **\$4,850**
- ☒ Deputy Refuge Manager (GS-13) (review proposals, budgeting, housing and vehicle coordination, etc.) - 4 days/yr. = **\$1,500**
- ☒ Refuge Manager (GS-14) (coordination, budgeting, etc.) - 2 days/yr. = **\$835**
- ☒ Administrative Assistant (GS-06) (office administration/permits) – 1 week/yr. = **\$900**
- ☒ Maintenance Worker (WG-09) (vehicle, boat, housing maintenance) - 1 week/yr. = **\$1,200**

Total Estimated Cost = **\$8,650**

In some cases, the costs may be less; particularly if there is not a need for implementation and maintenance assistance from Refuge personnel (i.e. manpower and/or equipment).

#### **ANTICIPATED IMPACTS OF THE USE:**

The Service encourages approved research to further the understanding of natural resources. Research by non-Service personnel adds greatly to the information base for refuge managers to make proper decisions. Some level of disturbance is expected with all research activities because researchers may be entering areas that are normally closed to the public, traveling off designated trails, collecting samples and/or handling wildlife. However, the special use permit will detail special conditions designed to minimize such negative impacts. Allowing non-Service personnel to conduct research should have little impact on Service interests if the research proposal is

completed properly by the researcher; and if Refuge personnel spell out the appropriate special conditions as part of the research proposal review and SUP preparation process. Violations of the special conditions in the Refuge SUP can result in suspension and termination of the research. If researchers conduct their projects with professionalism and integrity, the knowledge gained far outweighs potential adverse impacts.

#### **PUBLIC REVIEW AND COMMENT:**

As part of the CCP process for Back Bay NWR this compatibility determination was made available for a 30-day public review and comment period with the release of the Draft CCP/EA.

#### **DETERMINATION (CHECK ONE BELOW):**

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

#### **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

The Refuge requires all researchers to submit a detailed Research Proposal that follows Fish & Wildlife Service guidelines (see Attachment A.3) and Service Policy (FWS Refuge Manual Chapter 4, Section 6). Researchers must allow the Refuge at least 45 days to review submitted proposals before the research can begin. If the research involves the collection of wildlife, the Refuge must be allowed 60 days to review the proposal. Researchers must obtain all necessary state and federal scientific, collecting or other required permits before commencing their research. We will prioritize and approve proposals based on the need, benefit, compatibility, and funding required for the research.

As detailed in the special conditions of their SUP, researchers are required to submit a final report to the refuge upon completing their work. A copy of any published papers, summary data, and/or documents that are the end-products of the research study, must also accompany this final report. For long-term studies, interim progress reports will be required on (at least) an annual basis. We also expect that research will be published in peer-reviewed publications. All reports, presentations, posters, articles or other publications will acknowledge the Refuge System and Back Bay NWR, as partners in the research. All posters will adhere to Service graphics standards. This should ensure that the research community, partners, and the public understand that the research could not have been conducted without the presence of the Refuge and its operational support, as well as that of the Refuge System.

Back Bay NWR will issue SUPs for all research conducted by non-Service personnel. The SUP will list the special conditions necessary to ensure compatibility, and identify a schedule for annual progress reports and the submittal of a final report or scientific paper.

The Refuge may also ask for input and review of Research Proposals by Service Regional Refuge Biologists, other Service divisions, Virginia State agencies, or academic experts.



**JUSTIFICATION:**

This program as described is determined to be compatible. Any potential negative impacts of research activities on Back Bay NWR resources will be minimized by the restrictions included in the SUP special conditions. In addition, the research study design and researcher activities will be regulated and monitored by Refuge staff.

The Service encourages approved research to further our understanding of refuge natural resources and management. Research by non-Service personnel adds greatly to the information base for refuge managers to make proper decisions and practice adaptive management. Research conducted by non-Service personnel will not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the refuge was established. In most cases it should supplement them.

Signature: Refuge Manager  9/1/2010  
(Signature and Date)

Concurrence: Regional Chief  09/16/2010  
(Signature and Date)

Mandatory 10-year re-evaluation date: 09/16/2020  
(Date)

**LITERATURE CITED:**

U.S. Fish and Wildlife Service. 1985. *Refuge Manual*. Washington, D.C.: United States Government Printing Office.

### **ATTACHMENT A.3. BACK BAY NATIONAL WILDLIFE REFUGE STUDY PROPOSED GUIDELINES**

A study proposal is a justification and description of the work to be done, and includes cost and time requirements. The proposals must be specific enough to serve as blueprints for the investigation. They must spell out in advance systematic plans for the investigation at a level of detail commensurate with the cost and scope of the project and the needs of management. Please submit proposals electronically as a Microsoft® Word® document or hard copy to the refuge manager.

The following list provides a general outline of first-order headings/sections for study proposals.

- ☒ Cover Page
- ☒ Table of Contents (for longer proposals)
- ☒ Abstract
- ☒ Statement of Issue
- ☒ Literature Summary
- ☒ Objectives/Hypotheses
- ☒ Study Area
- ☒ Methods and Procedures
- ☒ Quality Assurance/Quality Control
- ☒ Specimen Collections
- ☒ Deliverables
- ☒ Special Requirements, Concerns, Necessary Permits
- ☒ Literature Cited
- ☒ Peer Review
- ☒ Budget
- ☒ Personnel and Qualifications

#### *Cover Page*

The cover page must contain the following information.

- ☒ Title of Proposal
- ☒ Current Date
- ☒ Investigator's(s')—name, title, organizational affiliation, address, telephone and fax numbers and e-mail address of all investigators or cooperators.
- ☒ Proposed Starting Date
- ☒ Estimated Completion Date
- ☒ Total Funding Support Requested from the U.S. Fish and Wildlife Service
- ☒ Signatures of Principal Investigator(s) and other appropriate institutional officials

#### *Abstract*

The abstract should contain a short summary description of the proposed study, including reference to major points in the sections “Statement of Issue,” “Objectives,” and “Methods and Procedures.”

*Statement of Issue*

Provide a clear precise summary of the problem to be addressed and the need for its solution. This section should include statements of the importance, justification, relevance, timeliness, generality, and contribution of the study. Describe how any products will be used, including any anticipated commercial use. What is the estimated probability of success of accomplishing the objective(s) within the proposed timeframe?

*Literature Summary*

This section should include a thorough but concise literature review of current and past research that pertains to the proposed research, especially any pertinent research conducted at the Back Bay National Wildlife Refuge. A discussion of relevant legislation, policies, and refuge planning and management history, goals, and objectives should also be included.

*Objectives/Hypotheses*

A very specific indication of the proposed outcomes of the project should be stated as objectives or hypotheses to be tested. Project objectives should be measurable. Provide a brief summary of what information will be provided at the end of the study and how it will be used in relation to the problem. These statements should flow logically from the statement of issue and directly address the management problem.

Establish data quality objectives in terms of precision, accuracy, representativeness, completeness, and comparability as a means of describing how good the data need to be to meet the project's objectives.

*Study Area*

Provide a detailed description of the geographic area(s) to be studied and include a clear map delineating the proposed study area(s) and showing specific locations where work will occur.

*Methods and Procedures*

This section should describe as precisely as possible, how the objectives will be met or how the hypotheses will be tested. Include detailed descriptions and justifications of the field and laboratory methodology, protocols, and instrumentation. Explain how each variable to be measured directly addresses the research objective/ hypothesis. Describe the experimental design, population, sample size, and sampling approach (including procedures for sub-sampling). Summarize the statistical and other data analysis procedures to be used. List the response variables and tentative independent variables or covariates. Describe the experimental unit(s) for statistical analysis. Also include a detailed project time schedule that includes start, fieldwork, analysis, reporting, and completion dates.

*Quality Assurance/Quality Control*

Adequate quality assurance/quality control (QA/QC) procedures help ensure that data and results are credible and not an artifact of sampling or recording errors; of known quality; able to stand up to external scientific scrutiny; and accompanied by detailed method documentation. Describe the procedures to be used to insure that data meet defined standards of quality and program requirements, errors are controlled in the field, laboratory, and office, and data are properly handled, documented, and archived. Describe the various steps (e.g. personnel training, calibration

of equipment, data verification and validation) that will be used to identify and eliminate errors introduced during data collection (including observer bias), handling, and computer entry. Identify the percentage of data that will be checked at each step.

### *Specimen Collections*

Clearly describe the kind (species), numbers, sizes, and locations of animals, plants, rocks, minerals, or other natural objects to be sampled, captured, or collected. Identify the reasons for collecting, the intended use of all the specimens to be collected, and the proposed disposition of collected specimens. For those specimens to be retained permanently as voucher specimens, identify the parties responsible for cataloging, preservation, and storage and the proposed repository.

### *Deliverables*

The proposal must indicate the number and specific format of hard and/or electronic media copies to be submitted for each deliverable. The number and format will reflect the needs of the refuge and the refuge manager. Indicate how many months after the project is initiated (or the actual anticipated date) that each deliverable will be submitted. Deliverables are to be submitted or presented to the refuge manager.

Deliverables that are required are as follows.

### *Reports and Publications*

Describe what reports will be prepared and the timing of reports. Types of reports required in fulfillment of natural and social science study contracts or agreements include:

1. Progress report(s) (usually quarterly, semiannually, or annually): (may be required)
2. Draft final and final report(s): (always required).

A final report must be submitted in addition to a thesis or dissertation (if applicable) and all other identified deliverables. Final and draft final reports should follow refuge guidelines (attachment A.2).

In addition, investigators are encouraged to publish the findings of their investigations in refereed professional, scientific publications and present findings at conferences and symposia. Investigator publications will adhere to Service design standards. The refuge manager appreciates opportunities to review manuscripts in advance of their publication.

### *Data Files*

Provide descriptions of any spatial (GIS) and non-spatial data files that will be generated and submitted as part of the research. Non-spatial data must be entered onto Windows CD-ROMs in Access or Excel. Spatial data, which includes GPS-generated files, must be in a format compatible with the refuge's GIS system (ArcGIS 8 or 9, Arcview 3.3, or e00 format). All GIS data must be in UTM 19, NAD 83. A condition of the permit will be that the Service has access to and may utilize in future mapping and management all GIS information generated.



*Metadata*

For all non-spatial and spatial data sets or information products, documentation of information (metadata) describing the extent of data coverage and scale, the history of where, when, and why the data were collected, who collected the data, the methods used to collect, process, or modify/transform the data, and a complete data dictionary must also be provided as final deliverables. Spatial metadata must conform to U.S. Fish and Wildlife Service (FGDC) metadata standards.

*Oral Presentations*

Three types of oral briefings should be included: pre-study, annual, and closeout. These briefings will be presented to refuge staff and other appropriate individuals and cooperators. In addition, investigators should conduct periodic informal briefings with refuge staff throughout the study whenever an opportunity arises. During each refuge visit, researchers should provide verbal updates on project progress. Frequent dialogue between researchers and refuge staff is an essential element of a successful research project.

*Specimens and Associated Project Documentation*

A report on collection activities, specimen disposition, and the data derived from collections, must be submitted to the refuge following refuge guidelines.

*Other:*

Researchers must provide the refuge manager with all of the following.

1. Copies of field notes/ notebooks/ datasheets
2. Copies of raw data (in digital format), including GIS data, as well as analyzed data
3. Copies of all photos, slides (digital photos preferred), videos, films
4. Copies of any reports, theses, dissertations, publications or other material (such as news articles) resulting from studies conducted on refuge.
5. Detailed protocols used in study
6. Aerial photographs
7. Maps/GIS
8. Interpretive brochures and exhibits
9. Training sessions (where appropriate)
10. Survey forms
11. Value-added software, software developed, models

Additional deliverables may be required of specific studies.

*Special Requirements, Permits, and Concerns*

Provide information on the following topics where applicable. Attach copies of any supporting documentation that will facilitate processing of your application.

*Refuge Assistance*

Describe any refuge assistance needed to complete the proposed study, such as use of equipment or facilities or assistance from refuge staff. It is important that all equipment, facilities, services, and logistical assistance expected to be provided by the Fish and Wildlife Service be specifically identified in this section so all parties are in clear agreement before the study begins.

### *Ground Disturbance*

Describe the type, location, area, depth, number, and distribution of expected ground-disturbing activities, such as soil pits, cores, or stakes. Describe plans for site restoration of significantly affected areas.

Proposals that entail ground disturbance may require an archeological survey and special clearance prior to approval of the study. You can help reduce the extra time that may be required to process such a proposal by including identification of each ground disturbance area on a USGS 7.5-minute topographic map.

### *Site Marking and/or Animal Marking*

Identify the type, amount, color, size, and placement of any flagging, tags, or other markers needed for site or individual resource (e.g. trees) identification and location. Identify the length of time it is needed and who will be responsible for removing it. Identify the type, color, placement of any tags placed on animals (see special use permit for stipulations on marking and handling of animals)

### *Access to Study Sites*

Describe the proposed method and frequency of travel to and within the study site(s). Explain any need to enter restricted areas. Describe the duration, location, and number of participants, and approximate dates of site visits.

### *Use of Mechanized and Other Equipment*

Describe any vehicles, boats, field equipment, markers, or supply caches by type, number, and location. You should explain the need to use these materials and if or how long they are to be left in the field.

### *Safety*

Describe any known potentially hazardous activities, such as electro-fishing, scuba diving, whitewater boating, aircraft use, wilderness travel, wildlife capture or handling, wildlife or immobilization.

### *Chemical Use*

Identify chemicals and hazardous materials that you propose using within the refuge. Indicate the purpose, method of application, and amount to be used. Describe plans for storage, transfer, and disposal of these materials and describe steps to remediate accidental releases into the environment. Attach copies of Material Safety Data Sheets.

### *Animal Welfare*

If the study involves vertebrate animals, describe your protocol for any capture, holding, marking, tagging, tissue sampling, or other handling of these animals (including the training and qualifications of personnel relevant to animal handling and care). If your institutional animal welfare committee has reviewed your proposal, please include a photocopy of their recommendations. Describe alternatives considered, and outline procedures to be used to alleviate pain or distress. Include contingency plans to be implemented in the event of accidental injury to or death of the animal. Include state and federal permits. Where appropriate, coordinate with and inform state natural resource agencies.

*Literature Cited*

List all reports and publications cited in the proposal.

*Peer Review*

Provide the names, titles, addresses, and telephone numbers of individuals with subject-area expertise who have reviewed the research proposal. If the reviewers are associated with the investigator's research institution or if the proposal was not reviewed, please provide the names, titles, addresses, and telephone numbers of 3 to 5 potential subject-area reviewers who are not associated with the investigator's institution. These individuals will be asked to provide reviews of the proposal, progress reports, and the draft final report.

*Budget*

The budget must reflect both funding and assistance that will be requested from the U.S. Fish and Wildlife Service and the cooperator's contributions on an identified periodic (usually annual) basis.

*Personnel Costs*

Identify salary charges for principal investigator(s), research assistant(s), technician(s), clerical support, and others. Indicate period of involvement (hours or months) and pay rate charged for services. Be sure to include adequate time for data analysis and report writing and editing.

*Fringe Benefits*

Itemize fringe benefit rates and costs.

*Travel*

Provide separate estimates for fieldwork and meetings. Indicate number of trips, destinations, estimated miles of travel, mileage rate, air fares, days on travel, and daily lodging and meals charges. Vehicle mileage rate cannot exceed standard government mileage rates if federal funds are to be used. Charges for lodging and meals are not to exceed the maximum daily rates set for the locality by the Federal Government (contact Back Bay NWR for appropriate rates).

*Equipment*

Itemize all equipment to be purchased or rented and provide a brief justification for each item costing more than \$1,000. Be sure to include any computer-related costs. For proposals funded under US Fish and Wildlife Service agreement or contract, the refuge reserves the right to transfer the title of purchased equipment with unit cost of \$1,000 or more to the Federal Government following completion of the study. These items should be included as deliverables.

*Supplies and Materials*

Purchases and rentals under \$1,000 should be itemized as much as is reasonable.

*Subcontract or Consultant Charges*

All such work must be supported by a subcontractor's proposal also in accordance with these guidelines.

*Specimen Collections*

Identify funding requirements for the cataloging, preservation, storage, and analyses of any collected specimens that will be permanently retained.

*Printing and Copying*

Include costs for preparing and printing the required number of copies of progress reports, the draft final report, and the final report. In general, a minimum of two (2) copies of progress reports (usually due quarterly, semiannually, or as specified in agreement), the draft final report, and the final report are required.

*Indirect Charges*

Identify the indirect cost (overhead) rate and charges and the budget items to which the rate is applicable.

*Cooperator's Contributions*

Show any contributing share of direct or indirect costs, facilities, and equipment by the cooperating research institution.

*Outside Funding*

List any outside funding sources and amounts.

*Personnel and Qualifications*

List the personnel who will work on the project and indicate their qualifications, experience, and pertinent publications. Identify the responsibilities of each individual and the amount of time each will devote. A full vita or resume for each principal investigator and any consultants should be included here.

## **INTERIM FINAL REPORT GUIDELINES**

Draft final and final reports should follow Journal of Wildlife Management format, and should include the following sections.

- ☒ Title Page
- ☒ Abstract
- ☒ Introduction/ Problem statement
- ☒ Study Area
- ☒ Methods (including statistical analyses)
- ☒ Results
- ☒ Discussion
- ☒ Management Implications
- ☒ Management Recommendations
- ☒ Literature Cited



603 FW 1  
Exhibit 1**FINDING OF APPROPRIATENESS OF A REFUGE USE**Refuge Name: Back Bay NWRUse: Outdoor Events

This exhibit is not required for wildlife-dependent recreational uses, forms of take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?		X
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?	X	
(h) Will this be manageable in the future within existing resources?	X	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	X	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

Where we do not have jurisdiction over the use ("no" to [a]), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to [b], [c], or [d]) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes X No       

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate        Appropriate X

Refuge Manager: *James P. Sanderson*

Date: 9/1/2010

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: *Douglas R. [Signature]*

Date: 9/2/2010

**A compatibility determination is required before the use may be allowed.**

**JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Back Bay NWR

Use: Outdoor Events

**NARRATIVE**

Non-competitive outdoor events that are appropriate on the Refuge include those that incorporate compatible uses, such as walking, biking, or canoe/kayaking. These events would not be hosted by the Refuge, but rather the Refuge would participate as a partner in the event. Each request has different logistics, and therefore, would be evaluated for impacts on the Refuge mission, and a Special Use Permit is issued unless found to be detrimental to the Refuge mission.

## **COMPATIBILITY DETERMINATION**

**USE:** Outdoor Events

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

### **REFUGE PURPOSES**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is this use? Is it a priority public use?**

The use is non-competitive outdoor events; such as foot, bike or canoe/kayak events or fundraisers, fishing derbies, youth scavenger hunts, or virtual geo-caching. These uses are not considered priority public uses of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997.

#### **(b) Where would the use be conducted?**

Outdoor events are allowed in any public use “zone” of the Refuge under terms specified in a Special Use Permit. This includes the beach (excluding the North Mile) and trails at the current headquarters/visitor contact station on the barrier spit, at canoe/kayak launch facilities, and at the proposed new headquarters/visitor contact station and associated trails. This use is not permitted in more environmentally sensitive areas managed for habitat conservation or wildlife protection.

#### **(c) When would the use be conducted?**

This use is allowed whenever the zones identified in “b” above are open for public access or during closed periods if determined not to have a significant impact on natural resources. For example, we consider this use at a canoe/kayak launch facility during the closed season, just as we would permit commercial canoe/kayak operations. These events are not allowed during public hunt dates. Open periods are as follows:

- ☒ beach (excluding the “north mile”) and VCS area to the south end of D-Pool (head of east and west dikes) – year round
- ☒ dike roads south of D-Pool – April 1 through October 31
- ☒ canoe/kayak launches – April 1 through October 31
- ☒ proposed new visitor contact station and trails – year round

**(d) How would the use be conducted?**

Each request must be presented in writing with details of who, what, where, when, why, and how the event will be conducted. Each request has different logistics, and therefore, would be evaluated for impacts on the Refuge mission. Using professional judgment, as long as there is no significant negative impact to natural resources or visitor services, or violation of Refuge regulations, a Special Use Permit will be issued outlining the framework in which this use can be conducted. Refuge staff will ensure compliance with the Permit.

**(e) Why is this use being proposed?**

Back Bay NWR annually receives multiple requests to conduct outdoor events. Every time the request is made, we initially evaluate the impacts of the request, and if found to be minimal, conduct a compatibility determination. Many determinations are found to be compatible. This process takes away from other priority management and administrative activities; and therefore, we propose to streamline this process by conducting one determination that generally covers this use.

Although special events may not directly contribute to the achievement of the Refuge purposes or the National Wildlife Refuge System mission, such event can contribute to the public’s understanding and appreciation of the Refuge’s natural resources.

**AVAILABILITY OF RESOURCES**

Permitting this use is within the resources available to administer our Visitor Services Program. Additional staff costs are incurred to review each request, coordinate with the outside entity and process a Special Use Permit, if necessary. Compliance with the terms of the Permit is within the regular duties of the Station Law Enforcement Officer. Anticipated costs are:

- ☒ Senior Refuge Biologist (GS-12) and/or GS-09 Refuge Biologist (review request) - 1 day/yr.



= \$325

- ☒ Visitor Services Manager (GS-12) and/or GS-09 Refuge Operations Specialist (review requests, coordinate with entity, process SUP) - 3 days/yr. = \$975
- ☒ Refuge Manager (GS-14) (review and approval) - 1 day/yr. = \$416
- ☒ Law Enforcement Officer (GS-09) (enforcement patrols) 1 day/yr. = \$208
- ☒ Administrative Assistant (GS-06) (issue SUP) – 1 day/yr. = \$180

## ANTICIPATED IMPACTS OF THE USE

There will be no significant negative impacts from this use; otherwise a Special Use Permit will not be issued for a specific request.

## PUBLIC REVIEW AND COMMENT

As part of the CCP process for Back Bay NWR this compatibility determination was made available for a 30-day public review and comment period with the release of the Draft CCP/EA.

## DETERMINATION (CHECK ONE BELOW):

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

## STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY

Each request must be presented in writing with details of who, what, where, when, why, and how the commercial operation will be conducted. Each request will then be evaluated for impacts to the Refuge. Using professional judgment, as long as there is no significant negative impact to natural resources or visitor services, or violation of Refuge regulations, a Special Use Permit will be issued outlining the framework in which this use can be conducted.

## JUSTIFICATION

We currently allow walking, hiking, biking, fishing, hunting, wildlife observation, photography, environmental education and interpretation. Special outdoor events may not directly contribute to the achievement of the Refuge purposes or the National Wildlife Refuge System mission, but can contribute to the public's understanding and appreciation of the Refuge's natural resources. Therefore, a group event is compatible as long as it is conducted safely, and does not conflict with a priority public use, within the confines of open public use areas. It is deemed this activity will not materially interfere with or detract from the mission of the NWRS or purposes for which Back Bay NWR was established.

Signature: Refuge Manager *Fred Zundwein 9/1/2010*  
(Signature and Date)

Concurrence: Regional Chief *Anthony D. Legen 09/16/2010*  
(Signature and Date)

Mandatory 10-year re-evaluation date: *09/16/2020*  
(Date)

**FINDING OF APPROPRIATENESS OF A REFUGE USE**Refuge Name: Back Bay NWRUse: Ground Military, Police and Fire Training

This exhibit is not required for wildlife-dependent recreational uses, forms of take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	X	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?	X	
(h) Will this be manageable in the future within existing resources?	X	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		X
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

Where we do not have jurisdiction over the use ("no" to [a]), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to [b], [c], or [d]) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

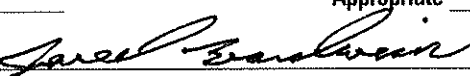
If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes        No X

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate        Appropriate X

Refuge Manager:



Date:

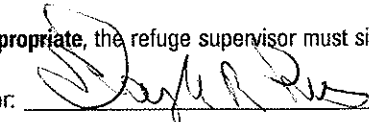
9/1/2010

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor:



Date:

9/2/2010

**A compatibility determination is required before the use may be allowed.**

## **JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Ground Military, Police and Fire Training

### **NARRATIVE**

The Virginia Beach/Norfolk area of Virginia has a large navy and other military presence, and is considered the east coast hub for navy operations. As a member of the Virginia Beach community, we support the needs of military and police. In addition, this use complies with Homeland Security Presidential Directive #13 which directs the Department of Interior to cooperate on inter-agency efforts to secure our maritime borders and further establishes policy, guidelines, and implementation actions involving federal, state, local, and private sector entities. Although the use does not directly contribute to the public's understanding and appreciation of natural or cultural resources, or is beneficial to our natural or cultural resources, it does not conflict with or prohibit other existing uses, including wildlife-dependent uses. Each request is treated individually, and a Special Use Permit is issued, unless found to be detrimental to the Refuge mission.



## **COMPATIBILITY DETERMINATION**

**USE:** Ground Military, Police and Fire Training

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

### **REFUGE PURPOSES**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is this use? Is it a priority public use?**

The use is ground military, police, and fire training. This use is not a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997.

#### **(b) Where would the use be conducted?**

Use is conducted on Refuge lands and beach front for military and police training. Also, Refuge-owned buildings that are no longer suitable or needed for Refuge purposes is permissible for military, police and fire training.

#### **(c) When would the use be conducted?**

Military beach use activities is allowed during nighttime hours, when the Refuge is closed to the public, between September 1 and April 31. As the Refuge is also proposing to allow individuals to night-time surf fish on the beach, under a Special Use Permit (select weeks October through February), night-time surf fishing will not be allowed unless and until the Refuge’s current access regulations as expressed in 50 CFR 26.34 are changed to permit such access, and such fishing may

be suspended to accommodate military exercises. Military beach activities would be prohibited from May 1 to August 31 to minimize any nighttime disturbance during sea turtle nesting season.

Training on Refuge lands, excluding the beachfront, could take place year round during daylight or nighttime hours. Each request is then evaluated for impacts to the Refuge. Using professional judgment, as long as there is no significant negative impact to natural resources or visitor services, or violation of Refuge regulations, a Special Use Permit is issued outlining the framework in which this use can be conducted. Fire training has stipulations regarding weather conditions before any type of burning would be allowed.

**(d) How would the use be conducted?**

Different branches of the U.S. military occasionally request to utilize the Refuge beach for navigation, spotting, landing and portaging watercraft across Refuge beach areas into Back Bay. This type of activity typically happens three times a year during night hours when the Refuge is closed to visitation. During this training, the number of military trainees is usually very small, often not even exceeding twelve individuals. Usually access by one or two vehicles are required or the units merely land a boat at the beach ramp area and portages, through the headquarters area into Back Bay under cover of darkness where they continue their training.

Police training typically consists of building entry, and raid training. During this training no “live” ammunitions would be stipulated along with other conditions on the special use permit. This training along with fire training would only be authorized in buildings no longer utilized for Refuge operations or housing. Fire department training could consist of the un-utilized building being burned down under a controlled training operation. A burn plan must be prepared and approved by the Refuge Manager for burning buildings.

Each request must be presented in writing with details of who, what, where, when, why, and how the operation will be conducted. Each request will then be evaluated for impacts to the Refuge. Using professional judgment, as long as there is no significant negative impact to natural resources or visitor services, or violation of Refuge regulations, a Special Use Permit will be issued outlining the framework in which this use can be conducted.

**(e) Why is this use being proposed?**

While this use is not a priority public use, it is important for the military, local police and fire agencies to have places to train to maintain their professional training skills. By allowing this use it strengthens relationships between the USFWS and these agencies. This use will not interfere with normal Refuge operations aside from minimal administration issuing special use permits. Some training, such as prescribed burning of buildings, would provide valuable training opportunities for the local fire department, while the Refuge would benefit with reducing the demolition cost associated with building removal. Potential impacts of this activity are analyzed below.

**AVAILABILITY OF RESOURCES**

Permitting this use is within the resources available by Visitor Services and Administrative staff budgets. Additional staff costs are incurred to review each request, coordinate with the outside entity and process a Special Use Permit, if necessary. Compliance with the terms of the Permit is within the regular duties of the Station Law Enforcement Officer. Anticipated costs are:

- ☒ Senior Refuge Biologist (GS-12) and/or GS-09 Refuge Biologist (review request) -

1/2 day/yr. = \$175

- ☒ Visitor Services Manager (GS-12) and/or GS-09 Refuge Operations Specialist (review requests, coordinate with entity, process SUP) - 1 days/yr. = \$325
- ☒ Refuge Manager (GS-14) (review and approval) - 1 day/yr. = \$416
- ☒ Law Enforcement Officer (GS-09) (enforcement patrols) 1 day/yr. = \$208
- ☒ Administrative Assistant (GS-06) (issue SUP) – 1 day/yr. = \$180

Costs associated with local police and fire department requests would likely be higher. Factors include justifying the permanent damaging or demolition of buildings, and increased biological costs of verifying no species would be impacted by the buildings use or removal. Anticipated costs are:

- ☒ Senior Refuge Biologist (GS-12) and/or GS-09 Refuge Biologist (review request) - 3 day/yr. = \$975
- ☒ Visitor Services Manager (GS-12) and/or GS-09 Refuge Operations Specialist (review requests, coordinate with entity, process SUP) - 2 days/yr. = \$650
- ☒ Refuge Manager (GS-14) (review and approval) - 3 day/yr. = \$1248
- ☒ Law Enforcement Officer (GS-09) (enforcement patrols) 1 day/yr. = \$208
- ☒ Administrative Assistant (GS-06) (issue SUP) – 1 day/yr. = \$180

While these costs are higher, the benefit of this training to the local agencies and the relationship between the agencies and the USFWS should surpass the costs associated. Costs are offset as justification to remove the unused building is still necessary if done through a private contract and federal funds instead of allowing the local police and fire departments to remove the building as training.

## ANTICIPATED IMPACTS OF THE USE

The prescribed burning of buildings would result in the discharge of air pollutants, (e.g., smoke, carbon monoxide, and particulate matter) which are subject to, and must comply with, all applicable federal, state, interstate, and local air pollution control requirements. Refuge concerns revolve principally around effective smoke management that ensures the public's air quality and visibility is not reduced, particularly in the vicinity of homes and vehicle travel routes. The consideration of wind speed, direction, and mixing heights is all-important to managing smoke. In planning these activities, we would consider these factors. There will be no significant negative impacts from this use as the special use permits would strictly limit conditions around the permits' issuance; otherwise a Special Use Permit will not be issued for a specific request.

## PUBLIC REVIEW AND COMMENT

As part of the CCP process for Back Bay NWR this compatibility determination was made available for a 30-day public review and comment period with the release of the Draft CCP/EA.

## DETERMINATION (CHECK ONE BELOW):

*Appendix A: Findings of Appropriateness and Compatibility Determinations*

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

### STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY

Each request must be presented in writing with details of who, what, where, when, why, and how the operation will be conducted. Each request will then be evaluated for impacts to the Refuge. Using professional judgment, as long as there is no significant negative impact to natural resources or visitor services, or violation of Refuge regulations, a Special Use Permit will be issued outlining the framework in which this use can be conducted.

### JUSTIFICATION

Allowing training exercises on Refuge property benefits local agencies and the relationship between the agencies and the USFWS. In general, the use does not conflict with Refuge goals and objectives, and in some cases could benefit the Refuge by reducing costs associated with demolition of unused buildings. Therefore, although this use typically is not undertaken to benefit Refuge natural and cultural resources, it obviously provides a benefit to the Refuge in relationships with local agencies who we may call on in time of need. Military exercises contribute to national security.

This use has been determined to be compatible provided the stipulations necessary to ensure compatibility are implemented, and the use does not exceed thresholds necessary for visitor safety and resource protection. We do not expect this use to materially interfere with or detract from the mission of the National Wildlife Refuge System, nor diminish the purposes for which the refuge was established. It will not pose significant adverse effects on Refuge resources, nor interfere with public use of the Refuge, nor cause an undue administrative burden.


Signature: Refuge Manager

  
(Signature and Date)

Concurrence: Regional Chief

  
(Signature and Date)

Mandatory 10-year re-evaluation date:

  
(Date)



**FINDING OF APPROPRIATENESS OF A REFUGE USE**Refuge Name: Back Bay NWRUse: Commercial Filming

This exhibit is not required for wildlife-dependent recreational uses, forms of take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?		X
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?	X	
(h) Will this be manageable in the future within existing resources?	X	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	X	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

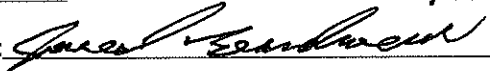
Where we do not have jurisdiction over the use ("no" to [a]), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to [b], [c], or [d]) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes        No X

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate        Appropriate X

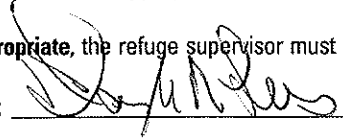
Refuge Manager: 

Date: 9/1/2010

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: 

Date: 9/2/2010

**A compatibility determination is required before the use may be allowed.**

## **JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Commercial Filming

### **NARRATIVE**

One of the stated goals of the National Wildlife Refuge System is to “foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants and their habitats”. As long as this use complies with stipulations in a Special Use Permit, and there is no significant negative impact to the natural resources or public uses on the Refuge, this use is appropriate. Allowing commercial filming is not outlined in an approved plan; however in general, the use does not conflict with Refuge goals and objectives. Each request has different logistics, and therefore, will be evaluated for impacts on the Refuge mission, and a Special Use Permit is issued unless found to be detrimental to the Refuge mission.

Although this use typically is not undertaken primarily to promote or benefit Refuge natural and cultural resources, it can indirectly promote the Refuge when filming for news or artistic purposes. In addition, it can be good public relations for allowing local crews to conduct this use. The Service recognizes that a higher awareness and appreciation of the diversity of fish, wildlife, and plants and the interconnectedness of life on earth strengthens public support for conservation. Refuges can play an important role in raising people’s understanding of wildlife and ecological processes.

## **COMPATIBILITY DETERMINATION**

**USE:** Commercial Filming

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

### **REFUGE PURPOSES**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is this use? Is it a priority public use?**

The use is commercial filming. This use is not a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997.

#### **(b) Where would the use be conducted?**

Commercial filming is allowed in any public use “zone” of the Refuge under terms specified in a Special Use Permit. This includes the beach (excluding the North Mile) and trails at the current headquarters/visitor contact station on the barrier spit, at canoe/kayak launch facilities, and at the proposed new headquarters/visitor contact station and associated trails. This use is permitted in more environmentally sensitive areas managed for habitat conservation or wildlife protection.

#### **(c) When would the use be conducted?**

This use is allowed whenever the zones identified in “b” above are open for public access or during closed periods if determined not to have a significant impact on natural resources. For example, we will consider this use at a canoe/kayak launch facility during the closed season, just as we would permit commercial canoe/kayak operations. Open periods are as follows:

- ☒ beach (excluding the “north mile”) and VCS area to the south end of D-Pool (head of east and west dikes) – year round
- ☒ dike roads south of D-Pool – April 1 through October 31
- ☒ canoe/kayak launches – April 1 through October 31
- ☒ proposed new visitor contact station and trails – year round

**(d) How would the use be conducted?**

Each request must be presented in writing with details of who, what, where, when, why, and how the commercial operation will be conducted. Each request has different logistics, and therefore, would be evaluated for impacts. Using professional judgment, as long as there is no significant negative impact to natural resources or visitor services, or violation of Refuge regulations, and we can determine that the use contributes to the achievement of the Refuge purposes or the National Wildlife Refuge System mission, a commercial filming permit, signed by the Regional Director will be issued outlining the framework in which this use can be conducted. Refuge staff will ensure compliance with the Permit.

**(e) Why is this use being proposed?**

At least once per year (often more), Back Bay NWR receives a request to conduct this use. Every time the request is made, we initially evaluate the impacts of the request, and if found to be minimal, conduct a compatibility determination. Many determinations are found to be compatible. This process takes away from other priority management and administrative activities; and therefore, we propose to streamline this process by conducting one determination that generally covers this use.

**AVAILABILITY OF RESOURCES**

Permitting this use is within the resources available to administer our Visitor Services Program. Additional staff costs are incurred to review each request, coordinate with the outside entity and process a Special Use Permit, if necessary. Compliance with the terms of the Permit is within the regular duties of the Station Law Enforcement Officer. Anticipated costs are:

- ☒ Senior Refuge Biologist (GS-12) and/or GS-09 Refuge Biologist (review request) - 1 day/yr. = **\$325**
- ☒ Visitor Services Manager (GS-12) and/or GS-09 Refuge Operations Specialist (review requests, coordinate with entity, process SUP) - 3 days/yr. = **\$975**
- ☒ Refuge Manager (GS-14) (review and approval) - 1 day/yr. = **\$416**
- ☒ Law Enforcement Officer (GS-09) (enforcement patrols) 1 day/yr. = **\$208**
- ☒ Administrative Assistant (GS-06) (issue SUP) – 1 day/yr. = **\$180**

**ANTICIPATED IMPACTS OF THE USE**



There will be no significant negative impacts from this use, and this use also will not negatively impact other uses; otherwise, recommendation for approval of the application will not be forwarded to the Director (see Stipulations below). This use will only be allowed in areas already open for public use; therefore, additional wildlife disturbances will be minimal, and minor disruptions to other refuge users during filming are possible.

## **PUBLIC REVIEW AND COMMENT**

As part of the CCP process for Back Bay NWR this compatibility determination was made available for a 30-day public review and comment period with the release of the Draft CCP/EA.

## **DETERMINATION (CHECK ONE BELOW):**

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

## **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY**

Each request must comply with 43 CFR Part 5 and Public Law 106-206 of May 2000.

Each request must be presented in writing within 30 days of the start date, with details of who, what, where, when, why, and how the commercial operation will be conducted. The form in Attachment A.3 is prescribed for an application for permission to make a motion picture, television production, or sound track on areas administered by the U.S. Fish and Wildlife Service. Each request will then be evaluated for impacts to the Refuge. Using professional judgment, as long as there is no significant negative impact to natural resources or visitor services, or violation of Refuge regulations, the request must be forwarded and approved by the Director of the Fish and Wildlife Service before the use can occur.

A bond shall be furnished, or deposit made in cash or by certified check, in an amount to be set by the official in charge of the area to insure full compliance with all of the following conditions:

- i. Utmost care will be exercised to see that no natural features are injured, and after completion of the work the area will, as required by the official in charge, either be cleaned up and restored to its prior condition or left, after clean-up, in a condition satisfactory to the official in charge.
- ii. Credit will be given to the Department of the Interior and the Service involved through the use of an appropriate title or announcement, unless there is issued by the official in charge of the area a written statement that no such courtesy credit is desired.
- iii. Pictures will be taken of wildlife only when such wildlife will be shown in its natural state or under approved management conditions if such wildlife is confined.
- iv. [Reserved]
- v. Any special instructions received from the official in charge of the area will be complied with.

- vi. Any additional information relating to the privilege applied for by this application will be furnished upon request of the official in charge.

If the application is approved, insurance coverage naming the federal government as a co-insured in the amount of \$1 million for general liability would be required.

The Refuge shall also collect any costs incurred as a result of filming activities, including but not limited to administrative and personnel costs. All costs recovered shall be in addition to any use fee.

## JUSTIFICATION

There is a considerable amount of history and natural habitat that exists on the Refuge. Allowing commercial filming is not outlined in an approved plan; however in general, the use does not conflict with Refuge goals and objectives. And, although this use typically is not undertaken for the purpose of promoting or benefitting Refuge natural and cultural resources, it can indirectly promote the Refuge when filming for artistic or news purposes. In addition, it can be good public relations for allowing local crews to conduct this use. There is also existing Departmental and agency policy and guidance that allows for, and supports this activity. This activity will not materially interfere with or detract from the mission of the NWRS or purposes for which Back Bay NWR was established. In addition, this activity will fulfill one or more purposes of the Refuge or the National Wildlife Refuge System.

50 CRF Part 29: We may only authorize public or private economic uses on the Refuge in accordance with 16 U.S.C. 715s, where we determine that the use contributes to the achievement of the Refuge purposes or the National Wildlife Refuge System mission.

Signature: Refuge Manager  9/1/2010  
(Signature and Date)

Concurrence: Regional Chief  09/16/2010  
(Signature and Date)

Mandatory 10-year re-evaluation date: 09/16/2020  
(Date)

ATTACHMENT A.4

Date \_\_\_\_\_

To the head of the \_\_\_\_\_

Service, Department of the Interior \_\_\_\_\_  
(Area)

(1) Permission is requested to make, in the area mentioned above, a \_\_\_\_\_  
\_\_\_\_\_

(2) The scope of the filming (or production or recording) and the manner and extent thereof will be as follows:

Weather conditions permitting, work will commence on approximately \_\_\_\_\_

and will be completed on approximately \_\_\_\_\_

(Fully describe the scope of the filming) \_\_\_\_\_  
\_\_\_\_\_

(An additional sheet should be used if necessary.)

(3) The undersigned accepts and will comply with the following conditions:

- i. Utmost care will be exercised to see that no natural features are injured, and after completion of the work the area will, as required by the official in charge, either be cleaned up and restored to its prior condition or left, after clean-up, in a condition satisfactory to the official in charge.
- ii. Credit will be given to the Department of the Interior and the Service involved through the use of an appropriate title or announcement, unless there is issued by the official in charge of the area a written statement that no such courtesy credit is desired.
- iii. Pictures will be taken of wildlife only when such wildlife will be shown in its natural state or under approved management conditions if such wildlife is confined.
- iv. [Reserved]
- v. Any special instructions received from the official in charge of the area will be complied with.

- vi. Any additional information relating to the privilege applied for by this application will be furnished upon request of the official in charge.

\_\_\_\_\_  
(Applicant)

For \_\_\_\_\_  
(Company)

Bond Requirement \$ \_\_\_\_\_

Approved: \_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Title)

[22 FR 1987, Mar. 26, 1957, as amended at 36 FR 2972, Feb. 13, 1971]



**FINDING OF APPROPRIATENESS OF A REFUGE USE**Refuge Name: Back Bay NWRUse: Weddings and Other Ceremonies

This exhibit is not required for wildlife-dependent recreational uses, forms of take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?		X
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?	X	
(h) Will this be manageable in the future within existing resources?	X	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	X	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

Where we do not have jurisdiction over the use ("no" to [a]), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to [b], [c], or [d]) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes        No X

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate        Appropriate X

Refuge Manager: *Juan P. Benavente* Date: 9/1/2010

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: *Douglas R. Res* Date: 9/2/2010

**A compatibility determination is required before the use may be allowed.**

**JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Weddings and Other Ceremonies

**NARRATIVE**

One of the stated goals of the National Wildlife Refuge System is to “foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants and their habitats”. As long as this use complies with stipulations in a Special Use Permit, and there is no significant negative impact to the natural resources or public uses on the Refuge, this use is appropriate.

Although this use typically is not undertaken to promote or benefit Refuge natural and cultural resources, it can expose the public to the Refuge and allows the opportunity to provide appreciation of the Refuge’s natural and cultural resources. Allowing ceremonies is not outlined in an approved plan; however in general, the use does not conflict with Refuge goals and objectives. Each request has different logistics, and therefore, would be evaluated for impacts on the Refuge mission, and a Special Use Permit is issued unless found to be detrimental to the Refuge mission.

## **COMPATIBILITY DETERMINATION**

**USE:** Weddings and Other Ceremonies

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

### **REFUGE PURPOSES**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is this use? Is it a priority public use?**

The use is performing weddings and other ceremonies. This use is not a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997.

#### **(b) Where would the use be conducted?**

Weddings and other ceremonies are allowed in any public use “zone” of the Refuge. This includes the beach (excluding the North Mile) and trails at the current headquarters/visitor contact station on the barrier spit, at canoe/kayak launch facilities, and at the proposed new headquarters/visitor contact station and associated trails. This use is not permitted in more environmentally sensitive areas managed for habitat conservation or wildlife protection.

**(c) When would the use be conducted?**

This use is allowed whenever the zones identified in “b” above are open for public access, or in compliance with stipulations set forth in the Special Use Permit. Open periods are as follows:

- ☒ beach (excluding the “north mile”) and VCS area to the south end of D-Pool (head of east and west dikes) – year round
- ☒ dike roads south of D-Pool – April 1 through October 31
- ☒ canoe/kayak launches – April 1 through October 31
- ☒ proposed new visitor contact station and trails – year round

**(d) How would the use be conducted?**

Each request must be presented in writing with details of who, what, where, when, why, and how the commercial operation will be conducted, and must comply with the stipulations listed below. Each request has different logistics, and therefore, would be evaluated for impacts on the Refuge mission. Using professional judgment, as long as there is no significant negative impact to natural resources or visitor services, or violation of Refuge regulations, a Special Use Permit will be issued outlining the framework in which this use can be conducted. Refuge staff will ensure compliance with the Permit.

**(e) Why is this use being proposed?**

At least once per year (often more), Back Bay NWR receives a request to conduct this use. Every time the request is made, we initially evaluate the impacts of the request, and if found to be minimal, conduct a compatibility determination. Many determinations are found to be compatible. This process takes away from other priority management and administrative activities; and therefore, we propose to streamline the process with one determination that generally covers this use.

**AVAILABILITY OF RESOURCES**

Permitting this use is within the resources available to administer our Visitor Services Program. Additional staff costs are incurred to review each request, coordinate with the outside entity and process a Special Use Permit, if necessary. Compliance with the terms of the Permit is within the regular duties of the Station Law Enforcement Officer. Anticipated costs are:

- ☒ Senior Refuge Biologist (GS-12) and/or GS-09 Refuge Biologist (review request) - 1 day/yr. = **\$325**
- ☒ Visitor Services Manager (GS-12) and/or GS-09 Refuge Operations Specialist (review requests, coordinate with entity, process SUP) - 3 days/yr. = **\$975**
- ☒ Refuge Manager (GS-14) (review and approval) - 1 day/yr. = **\$416**
- ☒ Law Enforcement Officer (GS-09) (enforcement patrols) 1 day/yr. = **\$208**
- ☒ Administrative Assistant (GS-06) (issue SUP) – 1 day/yr. = **\$180**



## **ANTICIPATED IMPACTS OF THE USE**

There will be no significant negative impacts from this use; any ceremony request that does not comply with the stipulations below or is determined to pose a risk of significant negative impacts will not be approved and no Special Use Permit will be issued.

## **PUBLIC REVIEW AND COMMENT**

As part of the CCP process for Back Bay NWR this compatibility determination was made available for a 30-day public review and comment period with the release of the Draft CCP/EA.

## **DETERMINATION (CHECK ONE BELOW):**

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

## **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY**

Each request must be presented in writing with details of who, what, where, when, why, and how the commercial operation will be conducted. Each request will then be evaluated for impacts to the Refuge.

Ceremonies are limited to a maximum of 50 participants. Standard SUP stipulations would apply, along with; no throwing of rice or flowers, no fires or lit candles, no vehicles on the beach, no dune access. No closure of any portion of the Refuge to accommodate such ceremonies. Ceremonies are permitted along the Refuge oceanfront, or at any other Refuge location with developed facilities for public access, such as Refuge piers, trails, and wildlife viewing stations, as long as the proposed use does not conflict with public use of those areas.

Bond requirement is at the discretion of the Refuge Manager, based on an analysis of the nature and scope of the event, and the associated level of risk for resource damage and anticipated cost of any restoration or repair of any damage. The permittee is responsible for site cleanup immediately following any ceremonial event. The Refuge Manager shall inspect the site prior to release of any bond.

As long as there is no significant negative impact to natural resources or visitor services, or violation of Refuge regulations, a Special Use Permit may be issued and the use allowed.

## JUSTIFICATION

Back Bay NWR is located in a remote portion of an urban, coastal area. Allowing various ceremonies are not outlined in an approved plan; however in general, these one-time uses do not conflict with Refuge goals and objectives. Individuals that request this use must already have an appreciation for the outdoors, whether it is the beach, bay or wooded areas, or just the fresh air. Therefore, although this use typically is not undertaken to benefit Refuge natural and cultural resources, it obviously provides participants an appreciation, or at least exposure to outdoor environments. This activity will not materially interfere with or detract from the mission of the NWRS or purposes for which Back Bay NWR was established.

Signature: Refuge Manager *James J. Seaborn 9/1/2010*  
(Signature and Date)

Concurrence: Regional Chief *Anthony D. Leger 09/16/2010*  
(Signature and Date)

Mandatory 10-year re-evaluation date: *09/16/2020*  
(Date)

**FINDING OF APPROPRIATENESS OF A REFUGE USE**Refuge Name: Back Bay NWRUse: Parking and Connecting Access to Horseback Riding

This exhibit is not required for wildlife-dependent recreational uses, forms of take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	X	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?		X
(h) Will this be manageable in the future within existing resources?	X	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	X	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

Where we do not have jurisdiction over the use ("no" to [a]), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to [b], [c], or [d]) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes        No X

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

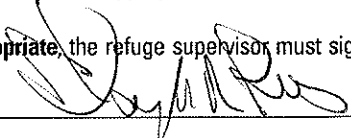
Not Appropriate        Appropriate X

Refuge Manager:  Date: 9/1/2010

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor:  Date: 9/2/2010

**A compatibility determination is required before the use may be allowed.**

**JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Parking and Connecting Access to Horseback Riding

**NARRATIVE**

In the Draft CCP/EA, Alternative C proposes to provide a parking area/trail head at the proposed new HQ/VCS (Tract 244) for horse trailers and connecting access to adjacent neighborhood horse trails. Horseback riding on the Refuge barrier spit is not appropriate (see Horseback Riding Appropriateness checklist). In order for this use to be compatible, our administrative HQ facility needs to be moved to that locale, riding on the Refuge would need to be kept to a minimum to connect to neighborhood trails, horses would have to be diapered (to eliminate effects of droppings), and a proper parking facility would need to be constructed.



## **COMPATIBILITY DETERMINATION**

**USE:** Parking and Connecting Access to Horseback Riding

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

### **REFUGE PURPOSES**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is this use? Is it a priority public use?**

The use is to provide parking and connecting access to neighborhood horseback riding. This is not a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997.

#### **(b) Where would the use be conducted?**

In the Draft CCP/EA, Alternative C proposes to provide a parking area/trail head at the proposed new headquarters and Visitor Contact Station on Tract 244 for horse trailers and connecting access to adjacent City and neighborhood horse trails.

#### **(c) When would the use be conducted?**

This use would not be permitted until (1) the City and neighborhood trails are established, and (2) our administrative headquarters facility was established at or adjacent to Tract 244. The use would be allowed on Refuge property from sunrise to sunset, and according to rules and regulations established by the City and the neighborhood developers, and approved for Refuge use.

**(d) How would the use be conducted?**

The use would be conducted in cooperation with the City of Virginia Beach and neighborhood developers adjacent to the Refuge. In order to adequately manage this use, our administrative headquarters facility needs to be moved to that locale and riding on the Refuge will be kept to a minimum, connecting trails with the most direct route possible. Horses would be required to be diapered (to eliminate effects of droppings) and a proper parking facility and comfort station provided. No use fee would be required, as we would not require one to access the new Visitor Contact Station area. However, donations would be encouraged.

**(e) Why is this use being proposed?**

Back Bay NWR is constantly pressured to open the Refuge to horseback riding. The primary reason public horseback riding is found inappropriate on the barrier spit is because the Refuge does not have the infrastructure and staff resources to manage the use. With additional resources to provide this use, it can be managed, in cooperation with the City.

**AVAILABILITY OF RESOURCES**

The Refuge currently does not have the resources to provide this use. Funding from private sources or the City of Virginia Beach would likely be required to provide the parking and comfort facilities for this use, as considerable Refuge funding increases are not likely. Minimum funding needed is estimated at \$200,000. Once facilities are established, staff resources needed to manage the use fit within the Station's budget.

**ANTICIPATED IMPACTS OF THE USE**

The area proposed for a parking and staging area on the western boundary of the Refuge on Tract 244 is previously farmed land that currently has minimal wildlife values other than as a buffer zone between new developments and the Refuge. Providing a connection for access to future non-Refuge trails would not result in adverse impacts to habitat. Potential impacts that may be predicted from uncontrolled horseback travel on Refuge habitat include: soil compaction and erosion, downstream sedimentation, trampling and mortality of fragile plant communities, habitat loss/deterioration, wildlife disturbance, hydrologic changes and a shift in plant communities along trails. These potential impacts as reported in the literature and through in-field investigation and observation at another Northeast Refuge are listed below:

**Impacts to plants:** Horse travel can impact plants on trails by directly crushing them. Indirectly, horses can impact plants by compacting soils diminishing soil porosity, aeration and nutrient availability (Kuss 1986). Hammitt and Cole (1998) note, compaction limits the ability of plants to re-vegetate affected areas. Plants growing in wet or moist soils are the most sensitive to disturbance from trampling effects (Kuss 1986). Moist and wet soil conditions are common in Canaan Valley particularly during spring and early summer and can occur on upland trails that have been incised and are channeling water.

Horse use may cause local impacts to plants and soils when confined. West Virginia Conservation Officer Harold Spencer observed that tying horses to trees damaged plants and soils. Confined horses in Canaan Valley ate the bark of nearby trees. This occurred at upland camps where horses were left for extended periods (Spencer 2002). According to Cole (1983), bark damage from

tethering horses to trees can result in insect invasions and girdling that can ultimately kill the tree. Soil compaction and erosion at these sites was also cited as a problem, especially where it exposed tree roots (Cole 1983). Erosion from horse hooves may increase root exposure.

**Soil Impacts:** Horses cause soil compaction, particularly when soils are wet which can directly affect plant growth and survival (Kuss 1986). Horseback riding has been found to cause braided trails in excessively muddy trail sections (Summer 1986). Weaver and Dale (1978) found horse use caused a greater loss of vegetation cover, wider and deeper trails, and greater soil compaction when compared to hiker use on meadow and forest trail conditions. Horses may cause trail erosion by loosening the soil and increasing soil particle detachment under both wet and dry trail conditions (Deluca et al 1998).

Field investigations of trails in Canaan Valley have documented extensive damage displaying classic examples of the erosive nature of Mauch Chunk derived soils after years of unregulated use. In addition, many trails are now trapping and channeling water creating more erosive conditions.

Kuss (1986) found that increasing moisture content of soils reduces the ability of the soil to support traffic. Summer (1986) recommended that horse trails be established on dry, well-drained sites. Routine maintenance to remove water and repair existing erosion is required to sustain horseback travel on most routes on the Main Tract (Rizzo 2002, Zeedyk 2002).

**Invasive Species:** Exposed soil and an abundance of sunlight along roads and trails provide ideal conditions for the establishment of invasive plant species. Invasive plant species may be transported through the presence of non-native plant seeds in feed hay. This concern has initiated strict requirements for “weed free” hay in some natural areas. At Yellowstone National Park and Green Mountain and Fingerlakes National Forests in New York only processed feed (pelletized or cubed hay) or certified “weed seed free” hay is allowed in the back country (Oliff 2001, Zimmer 2001).

**Hydrologic Impacts:** Roads and trails used for horseback travel can affect the hydrology of an area, primarily through alteration of drainage patterns. Bartgis and Berdine (1991) note that roads and trails can divert water from their original drainage patterns. This results in some drainages becoming dry while others accelerate erosion by being forced to carrying more water. Zeedyk (2002) documented many instances in Canaan Valley where existing trails were channeling water away from historic wetlands and in some cases causing erosion and sedimentation of bog and other wetland communities. These problems have profoundly if not irreversibly altered the extent, depths, characteristics and function of the wetlands on the Main Tract (Zeedyk 2002).

**Wildlife Impacts:** Horseback travel can cause disturbances to wildlife. Disturbances vary with the wildlife species involved and the type, level, frequency, duration and the time of year such activities occur. Whittaker and Knight (1998) note that wildlife response can include attraction, habituation and avoidance. These responses can have negative impacts to wildlife such as mammals becoming habituated to humans making them easier targets for hunters. Human induced avoidance by wildlife can prevent animals from using otherwise suitable habitat.

Trails can disturb wildlife outside the immediate trail corridor (Trails and Wildlife Task Force 1998, Miller et al. 2001). Miller et al. (1998) found bird abundance and nesting activities (including nest success) increased as distance from a recreational trail increased in both grassland and forested habitats. Bird communities in this study were apparently affected by the presence of recreational trails, where American robins were found near trails and specialist species (i.e. grasshopper sparrows) were found farther from trails. Nest predation was also found to be greater near trails (Miller et. al 1998).

Disturbance can cause shifts in habitat use, abandonment of habitat and increase energy demands on affected wildlife (Knight and Cole 1991). Flight in response to disturbance can lower nesting productivity and cause disease and death. Knight and Cole (1991) suggest recreational activities occurring simultaneously may have a combined negative impact on wildlife. Hammitt and Cole (1998) conclude that the frequent presence of humans in wildland areas can dramatically change the normal behavior of wildlife mostly through unintentional harassment.

Seasonal sensitivities can compound the effect of disturbance on wildlife. Examples include regularly flushing birds during nesting or causing mammals to flee during winter months, thereby consuming large amounts of stored fat reserves. Hammitt and Cole (1998) note that females with young (such as white-tailed deer) are more likely to flee from a disturbance than those without young. Some uses, such as bird observation, are directly focused on viewing certain wildlife species and can cause more impacts during breeding season and winter months.

Wildlife disturbance from horse use has been cited for trail closures in West Virginia. A trail was closed at the Bluestone Wildlife Management Area due to anticipated impacts of disturbance to wild turkey populations (Silvester 2001).

Impacts to wildlife may be indirectly caused through erosion and subsequent sedimentation of streams and vernal pools. Increased sediment loads can reduce aquatic vegetation and dissolved oxygen concentrations (Sadoway 1986). Sedimentation can directly kill aquatic invertebrates in which impacts the success of amphibian larvae and adults (Sadoway 1986). Observations by Refuge staff in 2002 document numerous occurrences of amphibian egg masses that failed after becoming coated in sediment from eroding trails and roads nearby. Bartgis and Berdine (1991) report that sedimentation was damaging habitat in Canaan Valley and could cause impacts to the rare plants, water quality and possibly affect habitat of the southern water shrew (*Sorex palustris punctulatus*), a state Species of Concern.

**User Conflicts:** Conflicts between trail users are commonly reported in the literature (Knight and Gutzwiller 1995, Ramthun 1995, Watson et. al 1994, Chavez et al. 1993). Conflicts range from concerns over personal safety to certain user groups feeling that they should be given priority over other groups based on a past history or other reasons. Providing safe routes for wildlife-oriented activities is an important consideration for wildlife observation trails on the Refuge. Safety considerations include ability of multiple modes of access to use a trail without creating dangerous conditions, ability to maintain a trail to allow safe use and timing of various uses such as wildlife observation.

This use would provide a positive impact on public relations and community cooperation with the City.



## PUBLIC REVIEW AND COMMENT

As part of the CCP process for Back Bay NWR this compatibility determination was made available for a 30-day public review and comment period with the release of the Draft CCP/EA.

## DETERMINATION (CHECK ONE BELOW):

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

## STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY

In order for the use to be compatible, the City and neighborhood trails need to be established and our administrative headquarters facility needs to be moved to that general locale. Horses would have to be diapered (to eliminate effects of droppings) and a proper parking facility is constructed.

## JUSTIFICATION

Horseback riding provides a means to observe wildlife and take photos, just like walking, hiking, and biking. Establishing a separate trail to conduct this use is compatible, with the appropriate infrastructure to support it. This proposed use would be in partnership with the City of Virginia Beach, as they too are looking for areas to provide this use. This activity will not materially interfere with or detract from the mission of the NWRS or purposes for which Back Bay NWR was established.

Signature: Refuge Manager *James Besswein 9/1/2010*  
(Signature and Date)

Concurrence: Regional Chief *Anthony D. Leggett 09/16/2010*  
(Signature and Date)

Mandatory 10-year re-evaluation date: *09/16/2020*  
(Date)

**LITERATURE CITED:**

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**FINDING OF APPROPRIATENESS OF A REFUGE USE**Refuge Name: Back Bay NWRUse: Cooperative Farming

This exhibit is not required for wildlife-dependent recreational uses, forms of take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	X	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?	X	
(h) Will this be manageable in the future within existing resources?	X	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		X
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

Where we do not have jurisdiction over the use ("no" to [a]), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to [b], [c], or [d]) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes X No       

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate        Appropriate X

Refuge Manager: *Jared Bealman*

Date: 9/1/2010

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: *David R. Ruo*

Date: 9/2/2010

**A compatibility determination is required before the use may be allowed.**

## JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE

**Refuge Name:** Back Bay NWR

**Use:** Cooperative Farming

### NARRATIVE

The Refuge Cooperative Farming Program is an integral component of the Refuge's overall habitat restoration and management efforts. In lieu of paying rent for the use of Refuge farm fields, the cooperators support the accomplishment of Refuge habitat management objectives by performing farming-related services associated with our annual habitat management program and activities.

With the City of Virginia Beach experiencing an explosive development boom, wooded habitats have been disappearing rapidly. Refuge staff have decided that the Refuge can best contribute to the overall landscape picture by replacing some lost wooded habitats, with more valuable, and less common, mast-producing native trees that used to exist prior to the agricultural and housing conversions of the past fifty years. The cooperators have assisted with field preparation, planting, mowing, disking, and invasive species control to help establish new native forest restoration areas that were originally agricultural.

The use of cooperative farming as an interim measure will keep fields open in preparation for conversion to native plant communities and will keep the fields relatively invasive-free in preparation for conversion to native plants.

## **COMPATIBILITY DETERMINATION**

**USE:** Cooperative Farming

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES:**

Executive Order No. 7907 on June 6, 1938; Migratory Bird Conservation Act (16 U.S.C. 715-715r); Emergency Wetlands Resources Act of 1986 (100 Stat. 3582-91).

### **REFUGE PURPOSES:**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S.C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION:**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105-57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is the use? Is it a priority public use?**

The use is cooperative farming. Cooperative farming is not a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997.

#### **(b) Where would the use be conducted?**

We allow this use on existing and newly acquired Refuge lands that were in an agricultural state at the time of acquisition. In some cases, the property acquisition was contingent on permitting the existing farming program to continue (for a limited time). Where we do not require farming to accomplish Refuge purpose(s), we cease farming and strive to restore natural habitats.

#### **(c) When would the use be conducted?**

Farming occurs all year long via planting and harvesting of corn and soybeans only. Corn is typically planted in late spring and harvested in late summer through early fall. Soybeans are planted in late spring/early summer, and harvested in late fall through early winter. Application of fertilizer, lime, and pesticides occurs before and after planting, but prior to harvest.

In this Comprehensive Conservation Plan, the Refuge cooperative farming program is to be phased out entirely within five years, unless habitat management objectives are not met or other unforeseen circumstances arise (see letter “e” below). This is to meet provisions of the National Wildlife Refuge System Improvement Act concerning compatibility and the biological integrity, diversity and environmental health of the Refuge System (Integrity Policy). The Integrity Policy directed that refuge habitats be managed to support historic conditions, defined as the “composition, structure, and functioning of ecosystems resulting from natural processes that we believe, based on sound professional judgment, were present prior to substantial human related changes to the landscape.” Further, the policy states that “we do not allow refuge uses or management practices that result in the maintenance of non-native plant communities unless we determine there is no feasible alternative for accomplishing refuge purpose(s).”

**(d) How would the use be conducted?**

The Refuge manages the farming program through a written cooperative agreement with a local farmer, and follow Refuge Manual guidance (US Fish and Wildlife Service. 2001) in selecting the farmer with whom we enter into an agreement. The Agreement will be revisited and, if necessary be revised on a biannual basis (every two years); after which it will be signed by both the Cooperative Farmer and the Refuge Manager. Field rental rates are determined by taking the average of rental rates from the local area.

Rather than making cash payments, the cooperator conducts farming-related services on Refuge habitats that are managed to meet the needs of migrating and wintering water-birds. Those services are calculated at an agreed-upon cost that will be annually deducted from the Refuge rent. Farming-related services eligible for inclusion into the agreement are: planting, disking, mowing, root-raking and applying herbicide. The cooperative farming agreement is a component of the Refuge’s Annual Habitat Management Program. Activities conducted by the cooperator help meet Refuge habitat management objectives.

The Refuge follows best management practices during implementation of the cooperative farming program. Forested or grass buffers are established between all farm fields and any adjacent wetlands, deep ditches and streams. “No-till” practices are also employed to the maximum extent possible. Pesticide Use Proposals for application of all pesticides are prepared, and only those that are shown to not impact fish and wildlife resources are approved.

In keeping with FWS policy and our own conviction, we will not seek approval to use genetically modified (GMO) crops; principally because of the potential conflicts they pose with native species and adjacent, private non-GMO crops of this area.

**(e) Why is this use being proposed?**

Originally established as a 4,570-acre National Wildlife Refuge in 1938, Back Bay NWR began expanding during the late 1980s through today to its current 9,200 acres. When fully acquired, the Refuge will total 11,007 acres. Much of the acquired acreage was natural Back Bay wetlands; however, a considerable portion now includes former or current agricultural (row crop) lands. The Refuge proposes to use cooperative farming as an interim measure to keep fields in an early-successional state, in preparation for conversion to vanishing native plant communities

(principally forest and shrub-scrub habitats) or for wetland restoration projects (moist-soil units/impoundments). US Army Corp of Engineers regulations require that the ground be turned over at least once every 4-5 years if restoration work is to be authorized. Otherwise the land reverts to a prior-converted wetlands status that precludes disturbance to such formerly farmed soils. This effectively eliminates a number of wetlands restoration options involving any disturbance to the topsoil. Keeping the land in a farming status prevents the loss of these options. In addition, these lands, if taken out of agricultural production and not immediately prepared for native habitat restoration, may become infested with invasive plant species, making reclamation of these fields much more difficult and expensive. These have been the primary justifications for cooperative farming since its inception in the early 1990's (soon after establishment of the relatively new Refuge acquisition boundary).

Our cooperative farming program is an integral component of our overall habitat restoration and management efforts; however, because we are still in the process of fully restoring former agricultural fields, we are not in the position to undertake new restoration of the existing 101 acres still in row crop production. We propose to keep lands in agricultural production until we can successfully restore them to native wetlands or forest habitats. We believe this can be accomplished in a five year period with the continued assistance provided through the cooperative farming agreements.

Acquiring land from willing sellers often is contingent on maintaining an existing farming operation. This is amenable because as Back Bay NWR acquires new lands or as we identify currently-owned tracts for restoration, we may need to use the cooperative farming program as an interim measure prior to habitat restoration (as described above).

In addition, the existing agricultural fields do have value as foraging areas for birds throughout the year. Large numbers of Canada geese (~500) and Snow geese (~1,500) have been observed feeding on waste grain in corn and soybean fields after their harvests. A variety of songbirds including the Eastern meadowlark, have been observed feeding in corn and soybean stubble, as well as growing soybeans fields.

When viewed in the context of the overall Refuge purpose, habitat management status and capabilities of Back Bay NWR, cooperative farming as is practiced at Back Bay NWR, and for the limited duration proposed, contributes to the purposes of the Refuge and the mission of the Refuge System. It does so by adding to the Refuge's ability to successfully restore and manage native habitats over the long term.

#### **AVAILABILITY OF RESOURCES:**

With the exception of staff time necessary to administer it, the cooperative farming program is self-sustaining. The disking, planting, mowing, herbicide application, and other farming practices are conducted in exchange for use of the 101 acres for agricultural production.



## **ANTICIPATED IMPACTS OF THE USE:**

Impacts from implementing a cooperative farming program are primarily of a positive nature; however, there are minimal negative impacts from this use. These negative impacts, although present, are minimized by requiring farmers to implement best management practices (see Stipulations To Ensure Compatibility below). Below is an outline of impacts.

### **POSITIVE IMPACTS**

#### *Short-term:*

- ☒ Farmer's equipment resources are available to Refuge for habitat management needs.
- ☒ Increased habitat management acreages achieved annually, allowing Refuge to accomplish its goals and mission.
- ☒ Increased wetlands and forested habitat restoration acreage achieved.
- ☒ Waste grain provides an additional fall and winter food for migratory waterfowl, game bird and migratory songbird populations.
- ☒ Reduces occurrence of invasive or other pest species (since farmer controls them).

#### *Long-term:*

- ☒ Increased water-bird use of Refuge habitat resources.
- ☒ Healthier migratory bird populations during the fall and winter seasons.
- ☒ Keeps land in a prior-converted (PC) state by having soil turned over annually; since that action keeps restoration possibilities open that involve soil disturbance.

### **NEGATIVE IMPACTS**

#### *Short-term:*

- ☒ Minimal turbidity to the Back Bay Watershed.
- ☒ Diminished biodiversity in farmed areas.
- ☒ Possible increased nutrient-loading into the Back Bay Watershed.

#### *Long-term:*

- ☒ Declining water quality.
- ☒ Discouragement of submerged aquatic vegetation (SAV) recovery in Back Bay.

## **PUBLIC REVIEW AND COMMENT:**

A public notice announcing the availability of this determination for a 21-day public review and comment period was printed in The Virginian Pilot and posted via the following outlets on December 21, 2006:

The Virginia Pilot  
Pungo Civic League Membership  
Back Bay Restoration Foundation Membership

BBNWR Visitor Contact Station  
Friends of Back Bay NWR

In addition, it was brought to our attention to have this draft determination sent to the Virginia Beach Farm Bureau and Virginia Beach Department of Agriculture. This was done on December 29, 2006, and therefore provided the same 21-day comment period for these entities.

During the public comment period, we received two letters; one each from the Virginia Beach Farm Bureau and Virginia Beach Agriculture Advisory Commission. Both letters expressed similar opinions that cooperative farming should remain a long-term use of the Refuge. Both groups also had concerns regarding changing drainage patterns and that eliminating cooperative farming would negatively impact future land acquisitions. Lastly, the Farm Bureau expressed concern for fire safety and requested a buffer be maintained between natural re-growth or reforested areas and individual homes.

The Biological Integrity Policy requires refuge land management programs to contribute primarily and directly to attainment of Refuge System goals and objectives. Although secondary benefits exist, unfortunately, farming's primary objective is raising agricultural crops for the farmer and therefore is not compatible over the long term. However, we recognize that there may be some cooperative farming occurring on the Refuge beyond the five-year window described. If new lands are acquired, for example, they may be temporarily enrolled in a cooperative farming program while plans are made and implemented to restore them to native habitats.

The Refuge Manager will provide responses to the two groups who wrote letters commenting on the draft determination, explaining the final decision.

## **DETERMINATION (CHECK ONE BELOW):**

☐ Use is Not Compatible

☒ Use is Compatible With the Following Stipulations

## **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

The program will adhere to the general conditions for cooperative farming programs listed in the Refuge Manual (6 RM 4 Exhibit 1). In addition, all Refuge farming operations are to be carried out in accordance with best available farming and soil conservation practices.

Other stipulations outlined in each Cooperative Farming Agreement are:

- ☒ Insecticide applications may only occur upon demonstration of an infestation, must have the approval of the Refuge Manager; and must adhere to the listing of herbicides and pesticides approved for use by FWS on Refuge lands;
- ☒ The cooperator is required to provide a one page “Annual Summary Report of Lime, Fertilizer, Pesticide and Planting Dates;”
- ☒ Cooperator agrees not to discourage, in any way, field feeding by Canada and snow geese. If significant crop damage occurs, the Refuge will renegotiate the agreement to compensate the cooperator for lost revenue;
- ☒ The use of genetically modified (GM) plants and seed are prohibited; and,
- ☒ All farming activities must maintain a minimum distance from all ditches and waterways.

## **JUSTIFICATION:**

The Refuge Cooperative Farming Program is an integral component of the Refuge’s overall habitat restoration and management efforts. In lieu of paying rent for the use of Refuge farm fields, the cooperators support the accomplishment of Refuge habitat management objectives by performing farming-related services associated with our annual habitat management program and activities. We have converted approximately 75 acres into native hardwoods or shrubs through planting or natural revegetation and plan on converting an additional 139 acres of old field/early successional habitat into native hardwoods; while well over 1,000 acres have been restored to wetlands status as the Frank Carter Impoundments (26a.) and five other wetlands restoration projects (1,000a.). Refuge biologists have used the cooperative farming agreement to help achieve these habitat management activities. With the City of Virginia Beach experiencing an explosive development boom, wooded habitats have been disappearing rapidly. Refuge staff have decided that the Refuge can best contribute to the overall landscape picture by replacing some lost wooded habitats, with more valuable, and less common, mast-producing native trees that used to exist prior to the agricultural and housing conversions of the past fifty years. The cooperators have assisted with field preparation, planting, mowing, disking, and invasive species control to help establish new native forest restoration areas that were originally agricultural. In addition, cooperative farmers have helped establish and maintain new Refuge wetland restoration sites, and maintain the existing 880 acre impoundment complex.

The use of cooperative farming as an interim measure will keep fields open in preparation for conversion to native plant communities and will keep the fields relatively invasive-free in preparation for conversion to native plants.

The Refuge has also maintained the support of the local farming community through the cooperative farming program. Support of the local farming community will assist in the purchase of additional lands within the Refuge acquisition boundary that are currently in an agricultural state.

In accordance with 50 CFR 29.1, cooperative farming, as described in this compatibility determination, contributes to the mission, purposes, goals, and objectives of Back Bay NWR and the National Wildlife Refuge System mission.

Signature: Refuge Manager *Jared Benzelwein 9/1/2010*  
(Signature and Date)

Concurrence: Regional Chief *Anthony D. Legg 09/17/2010*  
(Signature and Date)

Mandatory 10-year re-evaluation date: January 2017

#### LITERATURE CITED:

U.S. Fish & Wildlife Service. July 1993. *Station Management Plan, Back Bay National Wildlife Refuge*. Unpublished document on file at Back Bay National Wildlife Refuge, 4005 Sandpiper Road, Virginia Beach, VA 23456.

U.S. Fish & Wildlife Service. 2001. *Policy on Biological Integrity, Diversity, and Environmental Health*. Fish and Wildlife Manual, 601 FW 3, Washington, D.C.

**FINDINGS OF APPROPRIATENESS FOR THOSE SECONDARY USES  
WHICH WERE FOUND NOT APPROPRIATE**

- ☒ Commercial Fishing
- ☒ Horseback Riding
- ☒ Launching of Trailered Vessels
- ☒ Picnicking
- ☒ Swimming, Surfing, and Sunbathing on the Refuge Beach
- ☒ Off-Road Vehicle Access (excluding Motor Vehicle Access Permit Program)
- ☒ Dog Walking



## Refuge Name: Back Bay NWR

**Use:** Commercial Fishing – Bay Side Property

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X <sup>1</sup>	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?		X
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?		X
(h) Will this be manageable in the future within existing resources?		X
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	X	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes ☐ No ☒

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate   X   Appropriate           

Refuge Manager: Garrett Brashers Date: 9/1/2010

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix A: Findings of Appropriateness and Compatibility Determinations

**JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Commercial Fishing – Bay Side Property

**NARRATIVE**

The Refuge does not have the resources to administer this use on the bay-side property.

As noted, the Refuge does not have jurisdiction over commercial fishing on its oceanfront property; however, commercial fishing off the beach is allowed by specific individuals as mandated by the Motor Vehicle Access Permit Program authorized by Congressional law.

## Refuge Name: Back Bay NWR

**Use:** Horseback Riding

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?		X
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?		X
(g) Is the use manageable within available budget and staff?		X
(h) Will this be manageable in the future within existing resources?		X
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	X	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes X No       

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate ☒ Appropriate ☐

Refuge Manager: Jared Bernstein Date: 9/1/2010

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_ Date: \_\_\_\_\_

**A compatibility determination is required before the use may be allowed.**

**JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Horseback Riding

**NARRATIVE**

The Refuge does not have the parking space to support trailers in our parking areas, therefore trailers are prohibited. The entrance road can not safely accommodate cars, horses, hikers and bikers. In addition, the north end of the Refuge beach (“North Mile”) is closed to all public uses. If this use was found appropriate and compatible, Back Bay NWR would be the only area in Virginia Beach to allow “public” horseback riding. Therefore, it can be expected to be a heavy use; which Refuge staff do not have the resources to manage properly. It would add significantly to the workload of law enforcement, visitor services, and maintenance staff. Horseback riding requires active and frequent management and monitoring, as well as trails maintenance (see below impacts). Finally, horseback riding is not considered to be a “Big 6 Activity” by the U.S. Fish & Wildlife Service. Refuges are encouraged to support and increase Big 6 Activities (Interpretation, Environmental Education, Hunting, Fishing, Wildlife Photography and Wildlife Observation). Permitting horseback riding would be contrary to this policy.

Some of the above limitations to horseback riding of the existing Refuge infrastructure are addressed elsewhere in this CCP, however, critical issues can be summarized in this document. Potential impacts of horseback travel include: soil compaction and erosion, downstream sedimentation, trampling and mortality of fragile plant communities, habitat loss/deterioration, wildlife disturbance, hydrologic changes, invasive plant species introductions, and a shift in plant communities along trails. These potential impacts are listed below, as reported in the literature and through investigations and observations at another northeastern (Region 5) refuge (Canaan Valley National Wildlife Refuge [Canaan Valley NWR]):

**Impacts to plants:** Horse travel can negatively impact beneficial plants on trails by directly crushing them. Indirectly, horses can impact plants by compacting soils; thereby diminishing soil porosity, aeration and nutrient availability (Kuss. 1986). Hammitt and Cole (1998) note, compaction limits the ability of plants to re-vegetate affected areas. Plants growing in wet or moist soils are the most sensitive to disturbance from trampling effects (Kuss. 1986). Moist and wet soil conditions are common on Back Bay NWR, particularly during spring and early summer. Wet soil conditions can also occur on upland trails that have been incised by horse’s hooves and channel rain-water.

Horse use may cause local impacts to plants and soils when confined. West Virginia Conservation Officer Harold Spencer observed that tying horses to trees damaged plants and soils. Confined horses in the Canaan Valley NWR ate the bark of nearby trees. This occurred at upland camps where horses were left for extended periods (Spencer. 2002). According to Cole (1983), bark damage from tethering horses to trees can result in insect invasions and girdling that can ultimately kill the tree. Weaver and Dale (1978) found horse use caused a greater loss of vegetation cover.

**Soil Impacts:** Soil compaction and erosion at camping and tethering sites was also cited as a

problem in West Virginia, often resulting in exposure of tree roots (Cole. 1983). Erosion from horse hooves may increase root exposure. Horses cause soil compaction, particularly when soils are wet which can directly affect plant growth and survival (Kuss. 1986). Horseback riding has been found to cause braided trails in excessively muddy trail sections (Summer. 1986). Weaver and Dale (1978) found horse use caused wider and deeper trails, and greater soil compaction; when compared to hiker use on meadow and forest trail conditions. Horses may cause trail erosion by loosening the soil and increasing soil particle detachment under both wet and dry trail conditions (Deluca et al. 1998). Field investigations of horse trails in Canaan Valley have documented extensive damage from years of unregulated use; many trails are trapping and channeling water and eroding away.

Kuss (1986) found that increasing moisture content of soils reduces the ability of the soil to support traffic. Summer (1986) recommended that horse trails be established on dry, well-drained sites. Routine maintenance to remove water and repair existing erosion is required to sustain horseback travel on most routes (Rizzo. 2002; Zeedyk, 2002).

**Invasive Species:** Exposed soil and an abundance of sunlight along roads and trails provide ideal conditions for the establishment of invasive plant species. Invasive plant species may be transported through the presence of non-native plant seeds in feed hay, as well as browsing on non-natives. This concern has initiated strict requirements for “weed free” hay in some natural areas. At Yellowstone National Park and Green Mountain and Fingerlakes National Forests in New York only processed feed (pelletized or cubed hay) or certified “weed seed free” hay is allowed in the back country (Oliff. 2001; Zimmer. 2001).

**Hydrologic Impacts:** Roads and trails used for horseback travel can affect the hydrology of an area, primarily through alteration of drainage patterns. Bartgis and Berdine (1991) note that roads and trails can divert surface water from their original drainage patterns. This results in some drainages becoming dry, while others accelerate erosion as they transport more water. Zeedyk (2002) documented many instances in Canaan Valley where existing trails were channeling water away from historic wetlands and in some cases causing erosion and sedimentation of bog and other wetland communities. These problems have profoundly, if not irreversibly, altered the extent, depths, characteristics and function of involved wetlands (Zeedyk. 2002).

**Wildlife Impacts:** Horseback travel can cause disturbances to wildlife. Disturbances vary with the wildlife species involved and the type, level, frequency, duration and time of year such activities occur. Whittaker and Knight (1998) note that wildlife response can include attraction, habituation and avoidance. These responses can have negative impacts to wildlife; such as mammals becoming habituated to humans, making them easier targets for hunters. Human-induced avoidance by wildlife can prevent animals from using otherwise suitable habitat.

Trails can disturb wildlife outside the immediate trail corridor (Trails and Wildlife Task Force 1998; Miller et al. 2001). Miller et al. (1998) found bird abundance and nesting activities (including nest success) increased as distance from a recreational trail increased in both grassland and forested habitats. Bird communities in this study were apparently affected by the presence of recreational trails; American robins were found near trails and specialist species (i.e. grasshopper sparrows) were found farther from trails. Nest predation was also found to be greater near trails (Miller et. al. 1998).

Disturbance can cause shifts in habitat use, abandonment of habitat and increased energy demands on affected wildlife (Knight and Cole 1991). Flight in response to regular disturbances can lower nesting productivity and cause disease and death to resident birds. Knight and Cole (1991) suggest recreational activities occurring simultaneously may have a combined negative impact on wildlife. Hammitt and Cole (1998) conclude that the frequent presence of humans



in wildland areas can dramatically change the normal behavior of wildlife mostly through unintentional harassment.

Seasonal sensitivities can compound the effect of disturbances to wildlife. Examples include regularly flushing birds during nesting; or causing mammals to flee during winter months; resulting in the consumption of stored fat reserves necessary to survive. Hammitt and Cole (1998) note that females with young (such as white-tailed deer) are more likely to flee from a disturbance than those without young. Some uses, such as bird observation, are directly focused on viewing certain wildlife species and can cause more impacts during breeding seasons and winter months.

Wildlife disturbance from horse use has been cited as a reason for trail closures in West Virginia. A trail was closed at the Bluestone Wildlife Management Area due to anticipated negative impacts to wild turkey populations (Silvester 2001).

Impacts to wildlife may be indirectly caused through erosion and subsequent sedimentation of streams and vernal pools. Increased sediment loads can reduce aquatic vegetation and dissolved oxygen concentrations (Sadoway 1986). Sedimentation can directly kill aquatic invertebrates; which negatively impacts the success of amphibian larvae and adults (Sadoway 1986). Observations by Canaan Valley NWR staff in 2002 document numerous occurrences of amphibian egg masses that failed after becoming coated with sediments from nearby eroding trails and roads. Bartgis and Berdine (1991) report that sedimentation was damaging habitat in Canaan Valley and could cause impacts to the rare plants, water quality and habitat of the Southern water shrew (*Sorex palustris punctulatus*), a state Species of Concern. Fish species also suffer mortality and disease as a result of stream sedimentation.

**User Conflicts:** Conflicts between trail users (hikers, bikers, horse-back riders, wildlife photographers and birdwatchers) are commonly reported in the literature (Knight and Gutzwiller 1995, Ramthun 1995, Watson et. al 1994, Chavez et al. 1993). Conflicts range from concerns over personal safety to certain user groups feeling that they should be given priority over other groups based on a past history or other reasons. Providing safe routes for wildlife-oriented activities is an important consideration for wildlife observation trails on the Refuge. Safety considerations include ability of multiple modes of access to use a trail without creating dangerous conditions, ability to maintain a trail to allow safe use and timing of various uses such as wildlife observation.

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## Refuge Name: Back Bay NWR

**Use:** Launching of Trailered Vessels

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?		X
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?		X
(g) Is the use manageable within available budget and staff?		X
(h) Will this be manageable in the future within existing resources?		X
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	X	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?		X

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes X No       

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate X Appropriate           

Refuge Manager: Jared E. Smith Date: 8/1/2010

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_ Date: \_\_\_\_\_

**A compatibility determination is required before the use may be allowed.**

### **JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Launching of Trailered Vessels

### **NARRATIVE**

The Refuge supports priority public uses of Back Bay, such as hunting and fishing; however, the Refuge does not have the infrastructure to support trailers in our parking areas to facilitate these uses. In addition, trailered vessels tend to be larger, motorized vessels, which have greater tendencies to erode sensitive marsh shoreline with their wakes, disturb nesting birds, and re-suspend bottom sediments. These effects reduce water quality and SAV production, which is contrary to Refuge goals and objectives. Also, large, recreational motorboats can diminish quality wildlife-dependent experiences due to the noise disturbance.





**JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Picnicking

**NARRATIVE**

Back Bay NWR does not provide the amenities for picnicking activities, such as picnic tables, shelters, excessive trash containers, grills, etc. In addition, we do not have the resources to manage a large picnic area or program. However, the determination that picnicking is not an appropriate use does not preclude visitors from bringing food for nutrition/safety while participating in wildlife-dependent recreation.

Refuge Name: Back Bay NWR

**Use:** Swimming, Surfing, and Sunbathing on the Refuge Beach

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	X	
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?		X
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?		X
(g) Is the use manageable within available budget and staff?		X
(h) Will this be manageable in the future within existing resources?		X
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		X
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?	X	

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes        No X

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate X Appropriate \_\_\_\_\_

Refuge Manager: Special Agent Date: 9/11/2010

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix A: Findings of Appropriateness and Compatibility Determinations

**JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Swimming, Surfing, and Sunbathing on the Refuge Beach

**NARRATIVE**

Back Bay NWR has 5 miles of beach habitat along the Virginia Beach coast. The Refuge already receives 100,000 visitors annually, of which 75% occurs in the summer when tourists are in town for “fun in the sun.” The beach was closed to these uses in the late 1980’s to protect the beach habitat for wildlife. There is approximately 50 miles of public beach in Virginia Beach to conduct these uses. The Refuge does not have the facilities or staff to manage these uses.

## Refuge Name: Back Bay NWR

**Use:** Off-Road Vehicle Access (excluding Motor Vehicle Access Permit Program)

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?		X
(d) Is the use consistent with public safety?		X
(e) Is the use consistent with goals and objectives in an approved management plan or other document?		X
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?		X
(g) Is the use manageable within available budget and staff?		X
(h) Will this be manageable in the future within existing resources?		X
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		X
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?		X

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes 1 No X

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate X Appropriate \_\_\_\_\_

Refuge Manager:

Not Appropriate   ^   Appropriate             
Refuge Manager: Garcia-Bandwin Date: 9/1/2010

Date: 9/1/2010

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix A: Findings of Appropriateness and Compatibility Determinations



## **JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE**

**Refuge Name:** Back Bay NWR

**Use:** Off-Road Vehicle Access (not in Motor Vehicle Access Permit Program)

### **NARRATIVE**

50 CFR Sec 26.34 General Rules (n) states that “Entry on foot, bicycle or motor vehicle on designated routes is permitted one half-hour before sunrise to one-half hour after sunset for the purposes of nature observation and study, photography, hiking, surf fishing, and bicycling.” Furthermore, 50 CFR Sec 26.334 (s)(3) states “Registered motor vehicles and motorized bicycles (mopeds) are permitted on the paved refuge access roads and parking lot at refuge headquarters. All other motorized vehicular use is prohibited, except as specifically authorized pursuant to this rule.”

The use of motorized vehicles that are off-road would therefore be prohibited. The use of off-road vehicles is also not appropriate because they cause habitat destruction and disturbance to wildlife. The Refuge also lacks the staff resources to manage this use.

**Refuge Name:** Back Bay NWR

**Use:** Dog Walking

Decision criteria:	YES	NO
(a) Do we have jurisdiction over the use?	X	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	X	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?		X
(d) Is the use consistent with public safety?	X	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?		X
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	X	
(g) Is the use manageable within available budget and staff?	X	
(h) Will this be manageable in the future within existing resources?	X	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		X
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D. for description), compatible, wildlife-dependent recreation into the future?		X

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes   X   No       

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

**Not Appropriate** X                      **Appropriate** \_\_\_\_\_

Refuge Manager: Paul Brantwein Date: 9/1/2010

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_ Date: \_\_\_\_\_

**A compatibility determination is required before the use may be allowed.**

## JUSTIFICATION FOR A FINDING OF APPROPRIATENESS OF A REFUGE USE

**Refuge Name:** Back Bay NWR

**Use:** Dog Walking

### NARRATIVE

The Refuge has re-examined and evaluated our existing policy on dog walking to better meet the needs of our public while also minimizing wildlife disturbances. Since the Refuge mission consists of providing habitats for wintering and migrating birds that include waterfowl, shorebirds, wading birds, marshbirds and landbirds, minimizing those uses that provide the greatest potential conflicts and disturbances to those migratory bird species is a priority. Dogs have been shown by recent research to displace native migratory bird species from the natural habitats that Back Bay NWR was established to provide (Banks & Bryan. 2007; Fernandez-Juricic and Telleria. 2000).

Minimizing negative impacts to other associated wildlife species (deer, raccoon, fox, opossum, black bear, bobcat and coyote) that also share many of these same habitats is also a responsibility of Refuge staff. Research has revealed that dog presence results in definite predator-type defense reactions by these native wild mammals, including avoidance/vacating the area (Lima et al.1999; Mitchell & Banks. 2005; Lenth, et al. 2006.)

This determination does not extend to the use of (dog) retrievers by waterfowl hunters engaged in legal waterfowl hunting in those areas of Back Bay NWR that are opened to waterfowl hunting in the future.

Hunting with a retriever is a much less frequent occurrence than general dog walking , which presumably could occur daily and result in far greater negative impacts to wildlife and habitat. Furthermore, hunting is a priority public use of the National Wildlife Refuge System, and the use of retriever dogs helps to facilitate the use while minimizing potential negative impacts during waterfowl hunts.

## **COMPATIBILITY DETERMINATION**

**USE:** Dog Walking

**REFUGE NAME:** Back Bay National Wildlife Refuge

### **ESTABLISHING AND ACQUISITION AUTHORITIES**

Executive Order No. 7907 dated June 6, 1938; Migratory Bird Conservation Act (16 USC 715-715r); Emergency Wetlands Resources Act (100 Stat. 3582-91).

### **REFUGE PURPOSES**

- ☒ “...as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7907).
- ☒ “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d, Migratory Bird Treaty Act).
- ☒ “... the conservation of wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions...” (16 U.S. C. 3901b. 100 Stat. 3583, Emergency Wetlands Resources Act).
- ☒ The Back Bay NWR Station Management Plan (1993) expanded the role of the Refuge to include management emphases on other migratory bird groups, including threatened and endangered species, shorebirds, wading birds, marsh birds and songbirds/landbirds.

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION**

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Pub. L. 105–57; 111 Stat. 1252)

### **DESCRIPTION OF USE**

#### **(a) What is this use? Is it a priority public use?**

The use is dog-walking. Dog-walking at Back Bay NWR consists of one or more visiting public accompanied by one or more dogs on a leash, casually walking along Refuge parking areas, beaches, nature trails and roadways. Dog-walking is not a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997.

Dog-walking should not be confused with the use of (dog) retrievers by waterfowl hunters in those areas of Back Bay NWR that will be opened for waterfowl hunting in the future. Although waterfowl hunting is not currently permitted on the Refuge, there are plans to introduce that priority public use.

**(b) Where would the use be conducted?**

Dog-walking has been permitted in recent years in the following three areas:

1. On all public trails located on the barrier spit of Back Bay NWR; from the entrance, extending south to the south end of D-Pool (head of east and west dike roads).
2. On the Refuge beach from the southern end of the closed section of beach (“North Mile”), south to an imaginary line extending from the south end of D-Pool eastwardly to the ocean.
3. At the Horn Point canoe/kayak launch facility on Horn Point Road.

Habitats involved include woodlands, emergent marshes, shrublands, open water and open fields. All of these areas are frequently used by migratory landbirds, shorebirds, waterfowl, wading birds and marshbirds, together with deer, raccoon, fox, bobcat and opossum. Under the new determination, dog-walking will no longer be permitted at any locations of Back Bay NWR, including the above three.

**(d) When would the use be conducted?**

Dog-walking has been permitted during the winter through early spring period, in the headquarters, adjacent nature trails and beach areas, where migratory bird use was low. The public and their leashed dogs have been in those areas from one-half hour before sunrise to one-half hour after sunset between October 1 and March 31. This use has been terminated so that dog-walking is no longer be permitted in any Refuge locations.

**(e) How would the use be conducted?**

Since dog-walking is no longer be permitted, Refuge regulations (including 50 CFR) will be revised to reflect this change from our current policy. Public signing will also reflect the change at the Refuge entrance. A Refuge brochure/flyer will be developed for visitor information and education, specifically informing them about this regulation change. Refuge staff patrols by foot and vehicle will be conducted daily to advise visitors of the new regulation, monitor visitor activity, and as necessary, conduct enforcement.

**(f) Why is this use being proposed?**

This use is no longer being proposed. Rather, as a past use, dog walking is now eliminated. Banks and Bryan (2007, p.611) “clearly demonstrate that dog walking in woodland leads to a 35% reduction in bird diversity and 41% reduction in (bird) abundance .... These results argue against access by dog walkers to sensitive conservation areas.” Back Bay NWR is considered to be such a “sensitive conservation area.” The researchers cited in this document provide strong evidence that the mere presence of dogs creates significant negative impacts to migratory bird and native wildlife species, particularly in areas such as Back Bay NWR, that support moderate to high concentrations of wildlife.

**AVAILABILITY OF RESOURCES**

Ceasing this use is within the resources available to administer our Visitor Services Program. Some material costs will be incurred by the Refuge, in terms of administrative changes to 50 CFR, new signage and changes to Refuge brochures that detail Refuge regulations and policies. Compliance with the dog prohibition is within the regular duties of the Station Law Enforcement Officer.



## ANTICIPATED IMPACTS OF THE USE

The amount of available information (some included in this document) now supports the belief that the presence of dogs constitutes a significant negative impact to Refuge wildlife populations; particularly where significant wildlife concentrations exist, whether these populations be migratory birds or native mammals. Sime (1999) studied this issue closely and determined that there can be an increase in wildlife disturbances from dog walking due to normal dog behavior (i.e. jumping, barking, and running free off a leash). In the abstract portion of the paper Sime (1999) summarizes as follows: “At some level, domestic dogs still maintain instincts to hunt and/or chase .... Even if the chase instinct is not triggered, dog presence in and of itself has been shown to disrupt many wildlife species. Authors of many wildlife disturbance studies concluded that dogs with people, dogs on-leash, or loose dogs provoked the most pronounced disturbance reactions from their study animals .... In addition, dogs can force movement by ungulates (avoidance or evasion during pursuit), which is in direct conflict with overwinter survival strategies which promote energy conservation.” This unnecessary expenditure of needed overwintering calories by waterbirds on Back Bay NWR is also a major concern to Refuge biologists. Abraham (2006) also stresses that recurrent flushing of wildlife may result in decreased fertility, degraded health, increased stress, inefficient energy expenditure, and lowered capacity to survive and reproduce.

Sime (1999) continues by stating, “Dogs are noted predators of various wildlife species in all seasons. Domestic dogs can potentially introduce diseases (distemper, parvovirus, and rabies) and transport parasites into wildlife habitats. While dog impacts to wildlife likely occur at the individual scale, the results may still have important implications for wildlife populations. For most wildlife species, if a ‘red flag’ is raised by pedestrian-based recreational disturbance, there could also be problems associated with the presence of domestic dogs.”

Jones and Stokes (1977) showed that dog depredation can have serious detrimental impacts on local concentrated nesting bird populations. Data collected on bird flushings by dogs indicate that dog-induced shorebird flushes do occur and may be detrimental to declining bird populations (Soluri. 1994; Gill. 1994).

Domestic dogs have demonstrated the ability to act as predators on deer and other wildlife species when presented with the opportunity (Lowry & McArthur. 1978; Progulske & Baskett. 1958). As a result, these wildlife species tend to regard dogs as predators; their normal behavioral patterns are disrupted by the perception (scent) and presence of even leashed dogs.

Dogs are also used throughout Virginia for the hunting of deer, fox, bear and raccoon; further emphasizing the perception of those wildlife species of dogs as threats and predators. Knowledge of such predator presence elicits negative behavioral responses from such native land mammals that disrupts their normal behavioral biology and affects their health and well-being (Massopust a. R. K. A. 1984; Roseberry. 1980). In some cases the presence of a dog can inhibit the ability of a fox to secure food (Mitchell & Banks. 2005), leading to malnutrition or worse.

A comparison of wildlife activity levels in areas that prohibit dogs versus areas that permitted dogs was conducted by Lenth, et al (2006). This Study determined that altered patterns of habitat utilization by several native wildlife species occurred along trails that dogs utilized. This effect extended from 50 meters (for bobcat, squirrels, rabbits, chipmunks and mice) to 100 meters (for

mule deer) off the trail. These altered habitat use patterns did not occur along trails that dogs were not permitted on. The projected result is that those habitats that dogs are permitted in do not receive the wildlife use that they should. Such denied use of habitats to the resident wildlife population results in additional stressors on the health and well-being of those wildlife species. Finally, dog waste has created sanitation issues and an unsightly environment for other Refuge visitors and staff along Refuge trails, lawns and fields.

Dog-walking should not be confused with the use of retrievers by waterfowl hunters in those areas of Back Bay NWR that will be opened for waterfowl hunting in the future. Retrievers are highly trained animals that stay close to the waterfowl hunter/hunting party, in an enclosed duck hunting blind. The hunting party and dog is usually surrounded by water and remain confined to the blind until given the command to retrieve a downed duck or goose. Such retriever use ensures a minimal “crippling loss” of migratory waterfowl. As such, it is an effective and efficient conservation tool used in a priority public use only during the specific waterfowl hunting season.

## **PUBLIC REVIEW AND COMMENT**

As part of the CCP process for Back Bay NWR this compatibility determination was made available for a 30-day public review and comment period with the release of the Draft CCP/EA.

## **DETERMINATION**

  X   Use is not compatible

       Use is compatible, with the following stipulations

## **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY**

Dogs will no longer be permitted on Back Bay National Wildlife Refuge at any time of year, whether leashed or not. This compatibility determination does not extend to the use of (dog) retrievers by waterfowl hunters (as described above) engaged in legal waterfowl hunting in those areas of the Refuge that will be opened to waterfowl hunting in the future.

## **JUSTIFICATION**

The Refuge has re-examined and evaluated our existing policy on dog walking to better meet the needs of our public while also minimizing wildlife disturbances. Since the Refuge mission consists of providing habitats for wintering and migrating birds that include waterfowl, shorebirds, wading birds, marshbirds and landbirds, minimizing those uses that provide the greatest potential conflicts and disturbances to those migratory bird species is a priority. Dogs have been shown by recent research to displace native migratory bird species from natural habitats (Banks & Bryan. 2007; Fernandez-Juricic and Telleria. 2000) that Back Bay NWR was established to provide.

Minimizing negative impacts to other wildlife species (deer, raccoon, fox, opossum, black bear,

bobcat and coyote) that share many of these same habitats is also a responsibility of Refuge staff. Research has revealed that dog presence results in definite predator-type defense reactions by these native wild mammals, including avoidance/vacating the area (Lima et al.1999; Mitchell & Banks. 2005; Lenth, et al. 2006.) Although there is some demand for dog-walking on the Refuge, permitting dog-walking to continue in the face of this new evidence is no longer compatible with the purposes for our establishment and/or our management goals and objectives. The prohibition of dog-walking on Back Bay NWR will minimize adverse impacts to Refuge wildlife that perceive dogs as predators, particularly the migratory waterbird, deer, raccoon, fox and bobcat components of the Refuge wildlife population.

Signature: Refuge Manager  9/1/2010  
(Signature and Date)

Concurrence: Regional Chief  09/16/2010  
(Signature and Date)

10 Year date: 09/16/2020

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